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PRESIDENTIAL EDITORIAL

OUR COMMUNITY OF INTERESTS IN THE PREVENTION AND CURE OF DISEASE

WILLIAM H. F. WARTHEN, M.D., M.P.H.*

How many of us pause to ponder the import of the fundamental reasons for an existence as a State Medical Society? And if we do reflect, as we should most certainly do from time to time, we may well refer to the second paragraph of our *Constitution.*

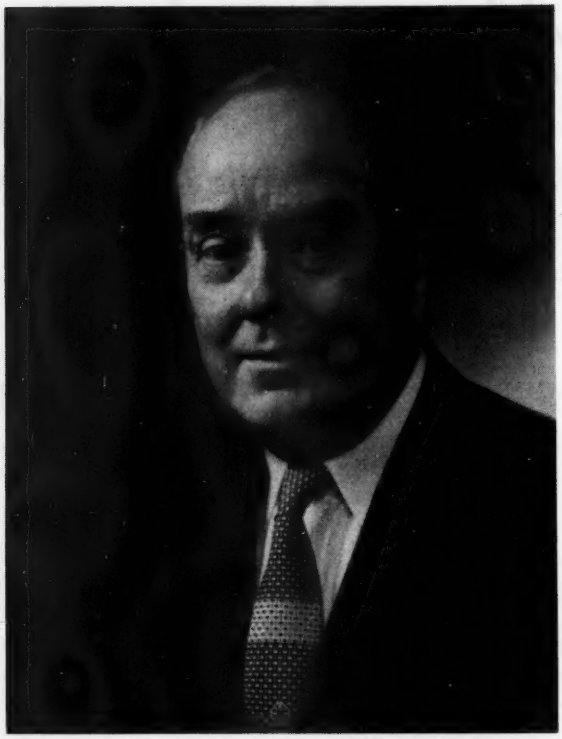
Aside from the inspiration of the phraseology, the impact of the meaning of the provocation to the best professional action can be a living force within each of us and for all of us. We are moved to marvel at the wisdom of our forebears and contemporary colleagues in the Medical and Chirurgical Faculty of Maryland who have framed the fundamental *Purposes of the objectives of our Society* thus:

> The purpose of this Faculty shall be to federate and bring into one compact organization the medical profession of the State of Maryland, and to unite with similar societies of other States to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and secure the enactment and enforcement of just laws relating to the practice of medicine and the public health; to foster friendly intercourse among physicians; and to enlighten and direct public opinion so that the profession shall become more useful in the prevention and cure of disease, in prolonging and adding comfort to life, and in promoting a satisfactory distribution of medical care to the citizens of Maryland.[1]

A physician who is specializing in the field of public health cannot help being moved with humble admiration by the vision of the authors and members of the Society when they agree to state: ". . . and to enlighten and direct public opinion so that the profession shall become more useful in the prevention and cure of disease. . ." It is, of course, the inclusion of the phrase "prevention and cure of disease" which has particular significance in both the thoughts and actions of public health physicians.

In the application of the principles of prevention and cure, two inseparable areas of medical endeavor, it is the teaming of the practitioner and the specialist which has and will continue to have the results for which we so ardently strive ". . . prolonging and adding comfort to life. . ." By serious implication our Past President Bender B. Kneisley includes the public health official in this medical coterie, and points out that the patient as

* President, Medical and Chirurgical Faculty, 1956.



WILLIAM H. F. WARTHEN, M.D., M.P.H.

well as the practitioner needs the value of help from the many rapidly growing medical resources of today.[2]

In public health, where the art of preventive medicine is applied, we all know that the medical society is not an agent of the health department nor do we consider the reverse to be true. This is an understandable and healthy situation. But by the mutual understanding of the common objectives and methods of the practitioner of medicine and the medical health worker, both curative medicine and preventive medicine for the patient and the community are enhanced to a high and enviable degree. When the objectives of the practitioner and the public health official simulate each other in their respective fields of clinical and preventive medicine, and when these objectives are sincerely and earnestly carried out by both the medical society and the health agency, medical service to the community flowers most brilliantly. It logically follows that the individual, the community, the medical society and the health agency will benefit. It can be an unfortunate circumstance when these important factors of interaction and cooperation fail to take place and even more tragic when differences of opinion, which are inevitable at times, cannot be resolved by such simple things as friendliness and "give and take" between the medical society and the health agency. It is here that we may well remind ourselves of the long and enviable record we have achieved by way of the highest degree of smooth working relationships between the medical profession and the health agencies of our State.

We cannot take too lightly the circumstance that the public will go far toward nudging the practitioner and the public health worker into formulating mutual objectives and joint

plans. This can be done harmoniously with the skills we know we have in our medical societies and in our health agencies. The astounding acceptance by the public in this country of voluntary health insurance and its unprecedented growth attests the soundness of the old campaign motto of the American Medical Association, "The Voluntary Way is the American Way."[3]

No one knows the complete answer to the question that daily obtrudes itself upon the professional consciousness of the practitioner in both clinical and preventive medicine: How best can I keep abreast in these fast moving times? Many ways have been considered and workable plans have been formulated to arrive at satisfactory answers. In reviewing these splendid efforts one cannot fail to be struck by the almost constant uniformity of agreement among our colleagues in the State Medical Society, past and present, upon the fundamental value of regular attendance at the meetings of our component medical societies. An interest and diligence in committee work especially provides a tremendous return in medical education to the individual member who has that happy faculty of giving freely of his substance to the task at hand.

It is only natural that more and more practitioners are rightfully hungering for postgraduate education. Its continuing emphasis is a pressing need and the implementation of a program by one method or another is a most worthy venture. Here, the words of Dr. William Henry Welch are heard again and reverberate in our consciousness once more: "Medical education is not completed at the medical school: it is only begun. Hence it is not only the quantity of knowledge which the student takes with him from the school which will help him in his future work: it is also the quality of mind, the disciplined habit of correct reasoning, the methods of work, the way of looking at medical problems, the estimate of the value of evidence."[4] In a life devoted to making the myriad of contributions to the broad field of medical advances, Dr. Welch always held fast in all of his thinking and teaching to the value of the fusion of the prevention and cure of disease in acquisition of knowledge and in practice if we are to make the most of our opportunities as practitioners.

A true, sincere and unprejudiced spirit of understanding and the consequent mutual cooperation between the practitioner and specialist will continue to lead to the attainment of one of the great purposes of our Society: the enlightenment and direction of public opinion so that we in the profession may become more useful in the prevention and cure of disease.

611 Hillen Road
Towson 4, Maryland

REFERENCES

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2. KNEISLEY, BENDER B., The general practitioner-specialist team, MARYLAND STATE MEDICAL JOURNAL, **3:** 1–2 (January, 1954).
3. Secretary's Letter of the American Medical Association, Letter No. 328, June 24, 1955.
4. The Advancement of Medical Education, Papers and Addresses by William Henry Welch, The Johns Hopkins Press, 1920, Vol. III, pp. 41–45.

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Scientific Papers

NEUROLOGY IN GENERAL PRACTICE*

EDWARD F. COTTER, M.D.

Complex neurological data has been sifted in the hope that a limited selection of material will prove helpful to the physician in general practice. My experience has been almost exclusively with adults, therefore, emphasis will be directed toward this group. Since the physician in general practice is usually the first to observe the neurological disorders, the emergency problems of neurology impressed me as an area worthy of consideration. Such problems are either infectious, traumatic, vascular or due to a convulsive disorder.

The physician has in his hands a magnificent tool in the antimicrobial agents, but these drugs are worthless when used after an infection has progressed beyond the range of clinical reversibility. Specific therapy plays such a vital role in the management of acute purulent meningitis that effective early treatment may be considered the keystone in the arch of successful management. This is a medical emergency demanding early recognition, prompt diagnosis, and proper treatment if the highest recovery rate is to be achieved.

Treatment must often be started on the basis of the morphological appearance and staining characteristics of the organism, and modified later when the organism has been identified. The gram-positive cocci may be treated with penicillin: 1,000,000 Units intramuscularly every two hours; and sulfadiazine 5 grams intravenously diluted in 100 ml. of 5 per cent glucose in distilled water, followed by 1 gram of sulfadiazine intravenously every four hours, or 2 grams of sulfadiazine intravenously every eight hours. The same regime is recommended for the gram-negative cocci.

When the organism is a gram negative rod, the drug of choice is chloramphenacol 500 milligrams intravenously every six hours. A combination of sulfadiazine, streptomycin, and chloramphenacol by some, while others have advocated the use of a tetracycline in place of chloramphenacol. Chloramphenacol is preferred because it has been observed to diffuse more readily into the cerebrospinal fluid.

Those who suggest a tetracycline instead of chloramphenacol do so because of the fear of its myelodepressant effect. It appears that the occurrence of aplastic anemia has been overemphasized as a hazard in the use of chloramphenacol. The drug can quite safely be used for a week with extremely little chance of toxicity; and by carefully following the peripheral blood counts, treatment may be continued for longer periods.

Of the gram-positive cocci the most frequently encountered is the pneumococcus, with the staphylococcus and streptococcus occurring much less commonly. Pneumococci meningitis tends to recur so that treatment must be prolonged for from four to six weeks. The streptococcus responds well to treatment. The staphylococcus may prove penicillin resistant. Sensitivity studies will help in the selection of the most effective antibiotic. Erythromycin and bacitracin may be considered, realizing of course, the toxicity of the latter drug.

Meningococcic meningitis is the most common gram-negative coccus infection. Often the condition can be diagnosed from the observation of

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sepsis, meningitis, rash and arthritis. The treatment of choice is sulfadiazine and penicillin, continued for seven to ten days after the patient has become afebrile and asymptomatic. If treatment can be started sufficiently early, the results are most satisfying. However, if delayed, the extreme toxicity of the infection can lead to a desperate situation with prostration and shock, which is no longer reversible with chemotherapeutic and antibiotic agents. The frequent observation of adrenal cortical hemorrhage at postmortem had led to the conclusion that the prostration and shock is due to adrenal cortical insufficiency, but adrenal cortical extract and cortisone, although commonly used, cannot be depended upon to reverse the fatal progress of the disease.

Influenzal meningitis is the most common gram-negative bacillus infection and is seen mostly in children. This organism responds very well to chloramphenacol. Eberthella coli, proteus, streptococcus faecalis and pseudomonas aeruginosa are infrequently observed and may prove difficult to treat. Sensitivity studies should be done and may prove very helpful. A combination of streptomycin, sulfadiazine, and chloramphenacol may be used. Intractable pseudomonas aeruginosa meningitis might be treated with polymyxin B in daily doses of 5 milligrams per kilo body weight systemically and 4 milligrams intrathecally. Eberthelli typhosi and bacillus tularensis are rare and both are sensitive to chloramphenacol. The bacillus tularensis is also sensitive to streptomycin.

In infants, subdural collections of fluid may be suggested by recurrent fever, convulsions, and bulging fontanels. These collections of fluid are usually sterile, but occasionally they occur as collections of encapsulated pus.

When the patient obviously has a purulent meningitis but no organisms can be found on smear of the cerebrospinal fluid, the cause is most apt to be the meningococcus. Most often, patients with meningitis are at least stuporous, if not unconscious, when treatment is begun, so that the initial treatment will of necessity be parenteral. It is unwise to give the stuporous or semi-conscious patient oral medication since the risk of aspiration is too great.

Early treatment of tuberculous meningitis is equally important, but the problem of diagnosis is considerably more difficult. Where there is a lymphocytic pleocytosis in the spinal fluid in an individual with fever and clouded consciousness, and where the spinal fluid pressure is strikingly elevated, the protein raised and the sugar content low, cultures should be set up for the tubercle bacillus along with routine culture and special culture for yeast. In addition, guinea pig inoculations should be performed and treatment immediately begun with streptomycin and para-amino-salicylic acid and as events may indicate the use of isonicotinic acid hydrazide.

Of the traumatic lesions, subdural hematomas are of sufficient frequency to be worthy of brief discussion. A blow to the head does not have to be severe nor does it have to be direct. As age advances, the blood vessels of the brain become atherosclerotic, with subsequent loss of elasticity. When there is a sudden shift of the brain in the cranium there may occur a tearing of cerebral vein at a point of attachment to a venous sinus. Tearing of a vein may occur in the young as well as the old, but the less elastic the vessel the more apt it is to tear. The interval between trauma and the development of significant symptoms may vary from days to months. Persistent headache is extremely common, with or without change of personality, intellect, or consciousness. A convulsive seizure and unconsciousness may occur after weeks of headache with or without personality change. Since the blow may have been insignificant, the changes noted in older persons may be erroneously attributed to mental deterioration resulting from cerebral arteriosclerosis.

The development of traumatic subarachnoid hemorrhage leaves little doubt as to the nature of the ailment. The headache, cervical rigidity, and bloody spinal fluid are quite striking. When

mental reactiveness is progressively impaired and stuporousness supervenes, search should be made for some complication such as subdural hematoma, subdural abscess, or meningitis. The cerebrospinal fluid on the initial lumbar puncture may be bloody while on the second it may be purulent. The alcoholic patient is the one most apt to create this type of situation. Observation until consciousness is regained and prompt X-ray of the skull and lumbar puncture should be performed when this does not occur within a reasonable time. If there is evidence of traumatic subarachnoid hemorrhage and improvement does not occur within the expected time, consider the possibility of a subdural hematoma, subdural abscess or purulent meningitis.

A gradual change is occurring in the concept regarding the manner of the development of a cerebral infarct resulting from obliterating atheromatous disease of the cerebral arteries. Recurrent loss of power on one side of the body, most commonly the arm, has in the past been considered the result of repeated vasospasm. This situation appears to be the result of an insufficiency of circulation within the blood vessels of the circle of Willis, resulting in periodic ischemia in the cerebral area least well supplied through this intercommunicating vascular system. There is in this condition, a general involvement of the cerebral vessels with thickening of the walls and narrowing of the lumen, with the process being more advanced in one vessel, most commonly the internal carotid or middle cerebral artery. When a drop in blood pressure occurs ischemia results, therefore, most frequently, in the region of the brain supplied by the middle cerebral artery. Reversibility and return of function is dependent upon the extent and duration of reduced blood flow. When the return of power occurs promptly, the ischemia has been transient and insufficient to cause necrosis. On the other hand, brain necrosis may be extensive when there is a severe and sustained fall in blood pressure such as may result from gastro-intestinal hemorrhage and operation. In some instances collateral circulation develops through the external carotid artery by way of the ciliary and meningeal arteries. As the obliterating atherosclerosis progresses a critical point is ultimately reached, and the capacity to compensate for sudden changes in blood pressure is lost. The occurrence of transient cerebrovascular symptoms may indicate that this state has been reached, in the same way that angina pectoris indicates the existence of myocardial ischemia. The symptom most commonly observed is transient recurrent hemiplegia. In the same way that angina pectoris is frequently followed by myocardial infarction, so the recurrent transient hemiplegia is followed by cerebral infarction.

In the treatment of patients with cerebral thrombosis every effort should be directed toward improving cerebral circulation. Stellate ganglion block has been used extensively, with variable results and strong difference of opinion. As yet, irrefutable evidence has not accumulated, but experience and observation indicate that the results are unpredictable and unreliable. The nitrous oxide method of Kety has provided an excellent method of clinical investigation of the cerebral circulation with measurement of cerebral blood flow and cerebrovascular resistance. It has been demonstrated that the cerebral vessels possess a remarkable capacity for intrinsic control, with relatively little change in cerebral blood flow in the face of wide differences in blood pressure. The effect of bilateral stellate ganglion block on the cerebral circulation in normotensive and hypertensive persons has been studied and no significant change in cerebrovascular resistance or cerebral blood flow was observed. It is reasonable to conclude that this intrinsic response or cerebral blood flow to change in blood pressure is reduced with the development of an obliterating atheromatous disease of the cerebral vessels. The use of vasodilating agents appears to be ineffective and if used in amounts sufficient to produce a drop in blood pressure, may be harmful. Carbon dioxide

in a concentration of 6 per cent acts as a powerful dilating agent on cerebral vessels. It is important in the management of these patients, to maintain and prevent any sudden change in blood pressure. The general care of the patient is of utmost importance with prevention of aspiration or hypostatic pneumonia, and maintenance of good pulmonary ventilation. Control of urinary difficulties, which may be due either to retention or incontinence, is important.

Convulsive disorders are either symptomatic or idiopathic and occur in a variety of ways. The grand mal attacks are frequently preceded by an aura with sudden unconsciousness, tonic and clonic spasms and often with salivation, tongue biting, urinary and fecal incontinence. After regaining consciousness, the patient is often drowsy, confused and dazed. Minor seizure may occur as episodes of transient impairment of consciousness. These may represent abortive forms of the grand mal attack and may resemble petit mal attacks; however, they are less frequent and give a different electroencephalographic pattern. The petit mal attacks are manifested by short periods of unconsciousness, and are more commonly seen in children, tending to recur each day. These attacks may occur as akinetic seizures in which there is a transient loss of muscle tone and the patient falls to the ground. In other individuals myoclonic jerks occur with sudden, jerky movements of the arm or trunk, without loss of consciousness. Psychomotor attacks are characterized by a period of amnesia lasting several minutes during which stereotyped repetitious movements occur. In some attacks there may be unintelligible muttering, unpredictable and even violent behavior. Such attacks may be wrongly considered hysteria. Focal seizures are limited to one part of the body and may exist as clonic movements or paresthesias. When there is an orderly progression of clonic movements from one part of the body to another it is called a Jacksonian seizure. Such seizures are commonly symptomatic, and secondary to an underlying organic cerebral process. Such seizures may be the initial manifestation of a generalized seizure.

Seizures beginning after 35 years of age should be considered symptomatic. The study of such cases should include skull X-ray, lumbar puncture with spinal fluid pressure determination, total protein level in the spinal fluid, and electroencephalogram. If any abnormality exists in the neurologic examination or the laboratory procedures, ventricular visualization or angiography should be done.

The drugs which have proved most satisfactory for grand mal, psychomotor, focal and minor seizures have been phenobarbital, sodium dilantin (diphenylhydantoin sodium), mebaral (3-methyl derivatives of phenobarbital), and phenacemide (phenurone). For petit mal seizures the drugs of choice have been tridione (trimethadione), paradione (paramethadione), and in addition phenobarbital and mebaral have been helpful. The drugs of choice in the treatment of grand mal, psychomotor, focal and minor seizures are phenobarbital and sodium dilantin. The dose of phenobarbital may be increased to the point of producing drowsiness. This is a maximum daily dose of 0.3 to 0.4 grams (4½ to 6 grains) although a smaller dose is advisable. Sodium dilantin may produce side reactions such as gastric distress, nausea, vomiting, nervousness, insomnia, unsteadiness, dermatitis, fever, hypertrophy of the gums, and psychotic manifestations. Unfavorable symptoms are uncommon, provided the dose is kept below 0.4 grams daily. The other drugs are considerably more toxic. The myelodepressant effect of mesantoin, tridione, and paradoine limits their usefulness. Phenurone is hepatotoxic. Fatalities have occurred with the use of these drugs. Their use is not advised except under competent, constant, and close supervision.

Corticotropin and cortisone have proved to be of no value in the majority of neurological diseases. Where improvement has occurred it has been variable and transient.

Multiple sclerosis remains as much of a puzzle

as ever. The forces that combine to bring about this patchy destruction of nervous tissue, are unknown, and there is a complete lack of even a reliable empirical treatment capable of producing a favorable change in the course of the illness. The causes of the unpredictabie spontaneous changes in the course of the disease, with remissions and exacerbations, remains mysterious and baffling. Physical and occupational therapy may be of help, with general supportive measures lending some assistance. However, there is really little aid for the physician beyond his own good sense and judgement in the management of each case in its own particular setting.

In conclusion I would like to suggest a word of caution to never take lightly the complaint of numbness and tingling of the fingers, hands, toes, or feet as this symptom indicates disturbance of proprioception either in the peripheral nerves or posterior column of the spinal cord. It may be the first symptom of pernicious anemia, polyneuritis or multiple sclerosis. The use of drug preparations containing combinations of iron, B_{12}, folic acid, and liver is not without danger. The hematologic features of pernicious anemia may be reversed but the neurologic changes of posterolateral sclerosis may emerge and progress, masked as an idiopathic degenerative disease. Its relation to pernicious anemia may fail to be established until advanced irreversible degeneration has developed.

Six East Read Street
Baltimore 2, Maryland

GYNECOLOGY IN OFFICE PRACTICE*

EVERETT S. DIGGS, M.D.†

Most of the problems of diagnosis and treatment which are seen by the gynecologist are first seen by the general practitioner. It is the purpose of this article to present in almost outline form a discussion of some of the more common gynecologic disorders. In an effort to be specific in suggestions of treatment, many drugs are listed by their proprietory names. This does not imply that many other similar drugs available through other pharmaceutical houses are not just as effective. One forms habits of using certain brands which have been effective and continues to use those drugs while response is satisfactory or until a more effective agent is brought to his attention. For example, there are over three hundred medications available for the treatment of trichomonas vaginitis, most of which have some value—only a few will be listed.

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† Assistant Professor of Gynecology, University of Maryland.

LEUCORRHEA

This is a symptom rather than a disease and is a term applied loosely to describe any abnormal vaginal discharge that is not bloody. The most common causes are, in anatomical order, vaginitis, cervical lesions both benign and malignant, endometritis, endometrial carcinoma, salpingitis.

VAGINITIS

Etiology

Trichomonas, monilia, senile or post-menopausal, non-specific.

Discharge

Trichomonas: Copious, frothy, grey or greenish yellow.

Monilia: More apt to be scant, watery, contains white flecks of exudate.

Senile: Purulent or watery, scant to moderate, frequently is blood-tinged.

Non-specific: Usually moderate to copious, purulent or mucopurulent.

Concomitant Symptoms

Pruritis common, particularly with trichomonas or monilia, to some extent with the senile type.

Mucous Membrane Changes

Trichomonas: Diffuse redness of vulva, vagina, and cervix or may have strawberry-like splotches of erythema.

Senile: Pale to diffuse redness, may appear granular or even ulcerative and adhesive.

Non-specific: Usually mild diffuse erythema.

Wet Preparations

Drop of discharge diluted in normal saline and examined microscopically.

Trichomonas: Trichomonads usually demonstrable if patient has not douched recently. Many pus cells, few epithelial cells.

Monilia: Threads and spores frequently demonstrable. If small amount of discharge is placed in test tube with 2 cc. of saline and allowed to remain at room temperature, threads are often demonstrable on wet preparation after 24 to 48 hours. Positive proof by culture. Moderate number of pus cells, moderate number of epithelial cells.

Senile: Loaded with pus cells, few if any epithelial cells, trichomonads and monilia not demonstrable.

Non-specific: Moderate to many pus cells. Few to moderate epithelial cells. Trichomonads and monilia not demonstrable.

Treatment

Trichomonas: Cleansing of vagina with cotton swabs at first office visit. Home treatment by patient with acid type douche and trichomonacide.

a. Fluoraquin or Devegan suppositories—one inserted high in the vagina q.n.h.s. and q.a.m. Cleansing douche prior to insertion of a.m. tablet using ½ cup white vinegar to 2 quarts of warm water.
b. Nylmerate jelly and Nylmerate concentrate solution. One applicator full of jelly to be inserted in vagina q.n.h.s. and q.a.m. Precede each application of jelly with vaginal douche using one tablespoonful of solution concentrate to one quart of warm water.

Treatment carried out continuously 2 to 6 weeks and particularly during menstrual period. Vaginal smear checked 2 weeks after beginning therapy and after 3 consecutive menstrual periods. In recurrent cases continue therapy 4 weeks and beginning 2 days prior to menstruation, during menstruation, and 2 days after menstruation for 3 consecutive menstrual cycles.

Monilia: Gentian violet therapy usually treatment of choice.

a. Office treatment of cleansing vagina with cotton swabs, thorough local application of 2% solution of gentian violet to vagina, cervix, and vulva. Treatment repeated q.3 days for 3 to 5 treatments. Fluoraquin or Devegan suppositories and vinegar douches as home treatment may be used in conjunction with gentian violet.
b. Gentia-jel inserts. One disposable applicator of jelly inserted in vagina q.n. and q.a.m. for 6 days. No douches taken while using this medication.
   Note: Gentian violet stains can be removed from clothing and fingers by application of acid alcohol or aromatic spirits of ammonia.
c. Proprionic acid preparations: Proprion jel: one applicator of jelly inserted in vagina q.n.h.s. and q.a.m.

Check vaginal smear in 2 weeks and after 3 consecutive menstrual periods.

Senile Vaginitis: Rule out malignancy by careful history, pelvic examination, Papanicolau smears, biopsy.

a. Fluoraquin or Devegan suppositories and vinegar douches as above.
b. Estrogenic therapy locally.
   1. Stilbestrol suppositories $\dot{1}$ (1 mgm.) q.n.h.s. inserted high in vagina. Cleansing vinegar and water douche may be taken in a.m. if desired. Continue therapy for 2 weeks.
   2. Dienestrol cream: one applicator full of cream inserted high in vagina q.n.h.s. for one week followed by one applicator half full used each night for 2 weeks. Cleansing acid type douche may be taken each morning.

Recurrences are common and repeated treatment frequently necessary.

Non-specific: Recheck smear to be sure trichomonas or monilia have not been overlooked. If patient has taken douche in past 24 hours, reexamine smear at second visit with no douche having been taken by patient.

a. Local sulfonamide or anti-biotic therapy. Triple sulfa or Gantrisin cream: one applicator full inserted high in vagina q.n.h.s. for 2 weeks. Cleansing douches avoided but may be used in a.m. if essential to maintain comfort. Anti-biotic suppositories: one in vagina q.n.h.s. for 3 to 5 days or q. 2 n. for 8 days. Prolonged or uninterrupted therapy often results in monilial infections.
b. Fluoraquin or Devegan suppositories and vinegar douches as above for two weeks.
c. Sulfonamides per orum, gm. $\dot{1}$ q.i.d. ad days $\dot{1}\dot{1}\dot{1}$ followed by gm. $\overline{ss}$ q.i.d. ad days $\dot{1}\bar{V}$. Cleansing, warm, acid type douche once or twice daily.
d. Penicillin parenterally at times helpful.

Cervical Lesions

Differentiation of malignant from benign lesions imperative. A high index of suspicion is important as every cervical lesion should be considered potentially malignant until proven benign. Routine Papanicolau smears are easily taken, take only a minute of time, and serve as a useful adjunct at arriving at an accurate diagnosis. It, however, is only an adjunct and diagnosis still depends upon microscopic examination of biopsied tissue. Cervical biopsies are, in most instances, easily taken, the procedure causes little pain or discomfort, and excessive bleeding from biopsy can usually be controlled by pressure applied with a cotton pledget. Any cervical lesion deserves a biopsy, regardless, of its apparent benign appearance.

Leucorrhea from cervicitis results from the infection of the endo-cervical glands and may be limited to an endocervicitis but more commonly is associated with an erosion of the cervical mucosa. The discharge varies from scant to profuse, from mucoid to frankly purulent. Vaginal smears usually show a marked preponderance of pus cells and considerable epithelial debris. The discharge may be blood tinged grossly or red cells may be found on microscopic examination. Such findings emphasize the importance of adequate biopsy.

Concomitant Symptoms

May consist of pruritis, urinary frequency and burning, abdominal discomfort, backache, dysmenorrhea, menorrhagia, and dyspareunia. If acute, cervical infections are best treated by sulfonamides per orum and sulfonamide creams per vaginum or by anti-biotics. Gentle, low pressure, warm cleansing douches are beneficial as mechanical cleansing agents and as a means of increasing local heat and thereby increasing blood supply.

In the absence of acute symptoms more active treatment of cervicitis may be used.

1. Gentle dilatation of cervical canal followed by topical application to the endocervix and cervix of 10% to 20% silver nitrate.

2. Linear cauterization of cervix and endocervix with electro-cautery. This procedure should not be done immediately after or imme-

diately preceding a menstrual period nor in the presence of acute infection. Slight bleeding may be anticipated during the first 48 hours after cauterization and as a rule more profuse bleeding occurs in 7 to 12 days when the eschar becomes detached. Very low pressure warm douches may be helpful in promoting healing. The use of one of the sulfonamide creams, one applicator of which is inserted high in the vagina each night at bedtime, promotes healing, decreases discharge, and diminishes the associated odor. Four to 6 weeks are usually required for complete healing and repeated cauterizations at times are necessary. If the cervical lesion is very severe or extensive, it is better treated by conization, normally a hospital procedure.

Malignant lesions of the cervix are, in the majority, squamous cell carcinoma and require radical therapy of radium, x-ray or both. In selected cases surgery alone, but more often combined with radiation therapy is the treatment of choice.

Early malignant changes, the so called carcinoma in situ, are frequently treated more conservatively by surgery alone, provided invasive malignancy is completely eliminated as the final diagnosis.

Endometritis

This cause for leucorrhea is frequently overlooked. The amount of discharge is frequently slight to moderate though in severe cases may be quite profuse. The discharge may be then, watery or frankly purulent. Vaginal smears usually show a few to moderate number of pus cells and considerable debris. There is frequently present an associated endocervicitis. The fundus of the uterus is usually somewhat tender and somewhat painful on motion. Concomitant adnexal tenderness without masses or adherence may be present.

Symptoms, in addition to leucorrhea, are often those of menorrhagia, dysmenorrhea, dyspareunia, abdominal discomfort, backache.

Treatment consists of sulfonamides or antibiotics, and increased local heat by means of tub baths and douches. Persistent endometrial infections frequently respond to gentle curettage. If the discharge is bloody, diagnostic curettage is indicated to rule out endometrial malignancy.

Endometrial Carcinoma

Most commonly occurs during or after the menopause. Average age is about 55. Most common symptoms are post-menopausal bleeding, intermenstrual bleeding, menorrhagia, or watery discharge. Any abnormal bleeding such as the above warrants a thorough diagnostic currettage. Papanicolau smears are helpful but not very accurate in giving positive results in endometrial carcinoma. Endometrial biopsy is excellent if positive results are obtained but do not rule out malignancy if negative as only a small sample of endometrium can be obtained by this method. Differential diagnosis often lies between malignancy, dysfunctional bleeding, atrophic endometritis, endometrial polyps, uterine fibroids, and bleeding from estrogen therapy. The mere presence of palpable fibroids does not rule out malignancy. They may both be present. Likewise, a history of estrogen therapy does not rule out malignancy as the cause of abnormal bleeding.

Treatment

Diagnostic curettage with microscopic examination of tissue, irradiation therapy by radium or x-ray, followed in 4 to 6 weeks by abdominal hysterectomy and bilateral salpingo-oophorectomy offer best results. In those who are poor surgical risks radium and x-ray therapy in combination can be used but as high a salvage cannot be expected. Estrogens are contra-indicated in the treatment of abnormal bleeding until malignancy is definitely and definitively excluded.

Salpingitis

Etiology in order of incidence is non-specific, gonococcal, tuberculous. Typical symptoms are

frequency and burning, abdominal pain, dysmenorrhea, dyspareunia, disturbance of menstruation usually consisting of menorrhagia with prolonged and heavy flow, frequently at decreased interval from the normal. Findings on examination are usually those of abdominal and adnexal tenderness, pain on motion of uterus and cervix, purulent vaginal discharge and visible cervicitis or endocervicitis. Tender adnexal masses or adherent adnexa may be palpable if the process is extensive. Fluctuant masses may be palpable in the adnexa or cul-de-sac if abscess formation is present. Fever usually present in acute and subacute stages but may be absent in chronic low grade infections. Differential diagnosis must be made from acute appendicitis, endometriosis, ectopic pregnancy, diverticulitis, regional ileitis, degenerated fibroids, and twisted ovarian cyst.

Treatment

1. Limited activity, bed rest if acute.
2. Chemotherapy, antibiotics by mouth or parenterally.
3. Increased local heat and blood supply by use of hot tub baths and douches.
4. Surgery if response is unsatisfactory after adequate trial of conservative measures or for drainage of abscesses.

SUMMARY

A few of the more common gynecologic diseases that may be seen frequently by the general practitioner have been discussed. An effort has been made to give the common symptoms, findings, differential diagnoses, and acceptable forms of treatment.

11 East Chase Street
Baltimore 2, Maryland

DAY BY DAY MANAGEMENT OF CHILDREN

WILLIAM C. STIFLER, JR., M.D.*

About seventy per cent of the medical care which children in Maryland receive is given by general practitioners. A large part of a practice dealing with children consists of well child supervision and the management of acute infections.

Well child supervision includes more than feeding instruction and immunizations. Advice concerning the child's growth, development, general behavior, and psychological management is of great importance. Babies are now better nourished and have deficiency diseases such as rickets, scurvy, and iron deficiency anemia less frequently than in the past because of accessory vitamins and cleaner and more adequate food. The incidence of infantile diarrhea has decreased. Diphtheria and pertussis are less common because of routine immunizations. Children are in better health and have fewer psychological problems when parents are properly instructed in what to expect as their children grow and develop, taking the wide range of normal into consideration, and in good general management based on common sense. Periodic physical examinations accompanied by discussions with parents are of prime importance for every child for the purpose of detecting disease at an early stage.

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THE CHILD DURING THE FIRST YEAR

Shortly after the baby is born the physician instructs the parents in general management and feeding. He also tells them what to anticipate as the baby grows older and emphasizes the wide range of normal behavior. If parents expect some crying, some spitting up, bowel movements which are not necessarily regular and occasional nondescript skin rashes they are

less likely to become apprehensive about these complaints and about the baby as a whole.

The baby is weighed and examined at intervals of every one to two months. The use of a weight chart is helpful. Significant deviation from the normal weight curve indicates that the patient should be investigated further for evidence of disease. A not too hurried discussion with parents at each visit is essential.

There is no absolute rule which governs infant feeding. Breast feeding is advisable when it is successful. Artificial feeding has been simplified greatly during recent years. The vast majority of infants thrive on mixtures of whole cow's milk and sugar or evaporated milk, water, and sugar. Various more or less complex milk preparations and numerous carbohydrate products are available, but add to expense and rarely have an advantage. One disadvantage to some of the proprietary milk preparations is that the carbohydrate is unnecessarily high for older babies. A mixture of one part of evaporated milk and one and one quarter to one and one half parts of water with about 5% sugar is simple, inexpensive, and satisfactory. One part of whole milk with or without one tenth to one fifth part of water and with 5% sugar is equally good. Sterilization is carried out according to approved technics. Terminal sterilization is the safest method.

Most babies do well if they are allowed to take feedings as they desire, but overfeeding is possible, and caloric intake should be between 40 and 65 calories per pound except under unusual circumstances. Whether feedings are given on "demand," on schedule, or on schedule modified by the baby's desires and the family's habits is unimportant as long as the infant gets the proper quantity of food and is content. Solid foods such as cereal, fruit, vegetable, meat, and egg are started between one and three months, and other foods from the table are added when the baby is willing to take them. If the infant does not take solid food well, milk should not be increased to compensate. Babies who, after the first few months, drink large quantities of milk and refuse solids are likely to develop iron deficiency anemia. This is especially true of prematures, who need extra iron beginning at a few weeks of age. One quart of milk or one large can (13 liquid ounces) of evaporated milk is sufficient, and many children take considerably less for varying periods. The sugar in the milk is decreased gradually and eliminated completely between three and six months. Accessory vitamins are started soon after birth and continued. Good sources of these vitamins are various multivitamin preparations containing vitamins A, C, and D, or fish liver oil and orange juice or ascorbic acid. The addition of vitamin B complex is thought to be unnecessary.

Colic and mild regurgitation usually have no relationship to food and are certainly not the result of faulty feeding as long as proper quantities are being given. Consequently frequent changes of food in an attempt to find something which "agrees" are disturbing and usually not necessary. Real milk allergy is rare, and milk substitutes or goat's milk are not indicated just because a baby cries excessively, spits up, or has mild diarrhea or mild eczema. Considerably more evidence of milk allergy is required before it becomes advisable to use a cow's milk substitute. It is far more important, when a baby has colic, to try to improve his adjustment to his surroundings than to interfere radically with his diet or prescribe antispasmodic or other drugs. A pacifier is frequently helpful and is not objectionable if it is kept clean. Adequate bubbling is beneficial. Great improvement frequently takes place when parental tension is lowered by reassurance that the baby is not ill and that the crying will eventually stop.

Immunizations against diphtheria, pertussis, tetanus, and smallpox should be given during the first year. A satisfactory method is to give 0.5 cc Diphtheria and Tetanus Toxoids and Pertussis Vaccine Combined at four to six week intervals for 3 doses beginning at two to four months of age, and to give a "booster" at twelve to eighteen

months. The optimum age for vaccination against smallpox is between four and twelve months.

The Child After 1 Year

During the second year of life the child is weighed, measured, and examined two or three times and at least once a year after that. Diet and general management are discussed at each visit. A small dose of vitamin D (400 units per day) should be given as long as the patient is growing. "Booster" injections are given every 2 or 3 years until the tenth year.

Most accidents to children are preventable. The doctor should emphasize the importance of keeping medicines, cleaning materials, and other possibly poisonous substances out of the reach of toddlers, and the great importance of teaching children to stay off the streets and highways. Other aspects of safety education are also the responsibility of the physician.

Small appetite is a common complaint. Except under unusual circumstances this complaint is not a serious one because most children do not suffer nutritionally if food is available and sensible guidance is used. Some parents expect their children to eat more than they need. A careful history and an assessment of the child's environment are likely to reveal factors which explain the small appetite. The use of vitamins to stimulate food intake is not recommended.

General Observations on the Management of Acute Infections

Children are frequently troubled by upper respiratory infections and unexplained fever of a few days' duration. The most important decision in the treatment of such cases is whether or not to use a sulfonamide or an antibiotic, and this decision must be made individually in each instance, but a plea is made not to be too free in the prescribing of specific drugs. Every attempt should be made first to arrive at a diagnosis so that appropriate therapy can be used. Bacterial cultures are not always feasible but leukocyte counts and urinalyses may be helpful and are easily available. Watchful waiting and symptomatic treatment are often preferable to the blind use of antibiotics. Most children with the common cold recover if left alone and many of those with unexplained fever are infected by a virus which is not affected by any drug. Injections of penicillin and then administration of other antibiotics or sulfonamides do not help fhildren who have summer grippe, roseola incantum, or poliomyelitis.

When specific therapy is used every effort should be made to prescribe the appropriate drug in an adequate dose and to continue the drug long enough. Patients with otitis media, for example, may be benefitted by various agents, but if the drug is discontinued as soon as symptoms subside and before the ear drum has healed manifestations of infection are likely to recur. Scarlet fever and other beta hemolytic streptococcal throat infections are treated successfully by penicillin and other drugs, but recurrence is likely unless therapy is continued far beyond the time of subsidence of symptoms. Rheumatic fever may be prevented by the timely and appropriate use of specific drugs in the treatment of beta hemolytic streptococcal throat infections. It is essential that small doses of penicillin or a sulfonamide be given to all children who have had rheumatic fever as prophylaxis against streptococcal infections and consequent repeated attacks of rheumatic fever. In these cases the drug should be continued for at least five years or until the patient is eighteen years of age and possibly longer.

The child, especially a girl, with unexplained fever with or without urinary tract symptoms, should have urinalysis. If pus is found in the voided specimen catheterization should be performed and the catheterized specimen examined microscopically and cultured. Appropriate sulfonamide or antibiotic is then given and continued until the infection has cleared. A definite diagnosis of urinary tract infection cannot be

made unless catheterized urine is examined. Pus in voided urine is strongly suggestive of infection in the bladder or kidney pelves, but can and frequently does come from the external genitalia. Urological investigation is indicated to rule out anatomical abnormalities particularly when there has been persistent or recurrent infection. Inadequate or improper treatment may lead to eventual irreparable kidney damage.

These simple measures pay dividends in preventing serious diseases and in developing healthier and happier children.

3301 North Charles Street
Baltimore 18, Maryland

ARTHRITIS IN GENERAL PRACTICE

CHARLES W. WAINWRIGHT, M.D.*

With the large number of people suffering from some form of rheumatic disease, rheumatology becomes a matter of concern to everyone interested in the practice of general medicine; for like the poor, the rheumatic always is with us. This is not a new problem thrusting itself upon us by reason of new developments or extenuating circumstances, but is an awakening to the fact that these people have been neglected in large measure for so long. And why is this true? Although there probably are many reasons, perhaps the principle ones are the chronicity of these afflictions and the time their management and treatment require, together with our ignorance of the causes of these disturbances and the lack of any specific remedy. These considerations should spur us on to further effort to better understand the nature of rheumatic diseases, and in fact, an enormous amount of energy and thought are being expended to discover the nature of these conditions and in the search for specific remedies. Whereas, neither of these goals have as yet been reached, these efforts have made us very aware of the enormity of the problem and have caused us to realize that a great deal can be done for these people. What then, is the objective in dealing with the problem of rheumatic diseases? It is the same as our approach to any other disease process, namely, to reverse the disease process and terminate the malady, and failing in that, to retard its progress and prevent in so far as is possible, the damaging results of the condition.

With this objective in mind, it at once becomes apparent that accurate diagnosis is of paramount importance. In the field of rheumatic diseases we are dealing with conditions of vastly different natures whose presence carries widely different prognostic import. To tell a patient because he has symptoms in and about a joint, that he has arthritis, is often terrifying for to most people the term "arthritis" immediately brings before them a picture of crippling deformity. When dealing with rheumatic fever in which joint manifestations are prominent, it is important to appreciate that they play a minor role, and that although the arthritis happens to be acute and severe, it is not our chief concern. When a patient presents an acute monarthritis with an abrupt onset, and particularly if the patient is a male, the appreciation that it may be gout is significant for the approach to the problem and what the patient may expect in the future is so different. We must not be deceived because the patient happens to be young, but be aware that gout is by no means confined to middle life and beyond. When the patient is disturbed by nodes on the distal joints of the fingers and is told he has an arthritis, it is important to know that this is not an inflammatory arthritis but a degenera-

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tive process in the cartilage of the joint with compensatory laying down of bone which carries none of the implications of an inflammatory arthritis; that it is an irreversible process but will not lead to crippling deformity. The same applies to any joint involved in an osteoarthritic process and carries a very different prognosis even though it be included in the general group of arthritides. Of even greater importance is the differentiation of osteoarthritis of the spine from Marie-Strumpell disease when the symptoms of the former come and go, whereas the latter so invariably lead to the poker-spine or even worse when the process extends to adjacent large joints. On the other hand an inflammatory arthritis, beginning so frequently in distal small joints but involving large joints as well, carries such a serious prognosis of joint damage of some degree and often such extensive functional alterations as to be crippling, that one must be sure of his ground before consigning a patient to such a fate. Classical rheumatoid arthritis requires no skill to be recognized, but it must be appreciated that its onset often is atypical and that months may be required before the disease assumes its characteristic form. When conditions which are rheumatic in nature are all classified as arthritis, and are all given the same outlook and prognostic import, not only is it loose and unsatisfactory diagnosis but is grossly unfair to the patient. Because there is something in and about a joint that hurts, we are all too prone to saddle a patient with the diagnosis of arthritis, with all the term implies to him, without exerting the effort to differentiate one type of arthritis from another, much less being sure that the condition is an arthritis and not some condition with joint manifestations which is not a true arthritis at all. To the average patient, arthritis means crippling deformity, and little do we appreciate the psychic trauma we may inflict when we use the term loosely. This should stimulate more accurate diagnosis and give us the personal satisfaction we should derive from more precise differentiation.

Whereas gout often presents a most difficult problem in diagnosis in its initial phase; it is in its differentiation from other acute arthritides that we so often are led astray, forgetting that gout often does occur in young people. When it has become chronic and tophi have appeared, there rarely is any difficulty. Early in the disease perhaps the character of the attack, an arthritis, often monarthricular but which may involve multiple joints, which has an abrupt onset and runs a short course, terminating spontaneously, and what is most important, leaving the involved joint in a clinically normal state, is the real diagnostic point. Of course repetition of this will give us the clue but in the initial attack, if we have not thought of gout before, the rapid return to a normal state of the joint should suggest the condition to us.

However, it is in the matter of chronic arthritis that the greatest difficulty often arises, for many times there are features present in one type which may suggest the other. We must realize that hypertrophic or osteoarthritis is not a late phase of rheumatoid arthritis and that histologically the joint change is entirely different, being in the former primarily a degeneration of cartilage for which there is a compensatory laying down of bone; whereas the latter, rheumatoid arthritis, is, as the term arthritis indicates, a truly inflammatory reaction within the joint. Clinically hypertrophic arthritis is a joint reaction which develops insidiously with increasing years to the point that it is present in all joints to some degree by the time we are sixty or seventy years of age, involving in the main joints of greatest movement, but with heredity trends in so far as the distal joints of the fingers are concerned, and without inflammatory reaction except in so far as irritation may produce it; and in the strict connotation of the term, is not an arthritis at all. How much more realistic it would be if we could discard the term "arthritis" for this type of joint change and think of it as degenerative joint disease! Then realizing that it is the condensation and compensatory laying

down of bone which is the real offender, it can be appreciated that this is an irreversible process. Efforts thus far to describe the change to one cause or another have been fruitless, and in the present state of our knowledge we have no conception of how to prevent it. This must await a better understanding of the ageing process. There are but few factors influencing it that we do understand or which are within the scope of our control, but it now is appreciated that the change begins far earlier than we have realized. When the reaction, either by extent or location, has reached the point producing symptoms, pain, we say that we have hypertrophic arthritis, whereas the process may have been going on for decades. Even then it is unassociated with constitutional reaction and none of the general features of inflammatory arthritis are present, but only pain on use of the affected joint and the stiffness of the associated muscle groups. It is understandable that weight-bearing joints, particularly when subjected to the constant trauma of overweight, should so commonly be the first joints in which hypertrophic arthritis makes its symptomatic appearance. There is perhaps no location in the body where changes are subjected to more loose interpretation than in the spine. The usual method of procedure is to X-ray the spine of one complaining of pain in the back and because osteophytes are seen at the edges of the vertebral bodies, to tell the patient he has arthritis of the spine. We overlook the fact that this lipping of the vertebral bodies is a natural course of events in the wear and tear of the ageing process as the intervertebral cartilages degenerate and become thin, losing their buffering function and permitting more play. To counteract this, sclerosis of the margins of the vertebral bodies follows and may be so excessive as to actually bridge the intervertebral space and in so doing, reduce the movement of the spine. On the other hand, when hypertrophic arthritis involves the articulating joints of the spine we have the same degenerative changes of cartilage and osteophyte formation, and these, together with associated muscle spasm, tend to limit movement, which is painful. It is important to appreciate the role that muscle spasm plays in such backs and in any joint so affected, in the production of pain, and that even the abnormal muscle stress and strain of postural defects, in the absence of these changes, are in themselves painful. It is really in exceptional instances that osteophytes of the vertebral bodies are pain producing. Of course the degenerative change may be so extensive and the osteophytic response so excessive, as often happens in a knee joint, that the joint is mechanically defective and limited in its function, all of which is painful.

When therefore, we consider the nature of this joint change, understand that it is an irreversible change, and is not a part of nor a phase of inflammatory arthritis, we appreciate that treatment is not directed at altering the state of the joint but at altering and removing the extraneous factors that play a part in producing symptoms. We appreciate that drugs play a minor role and that rest, weight reduction, and the relaxation brought about by the use of heat and traction, plus the avoidance of insults to the joint, are the really effective measures. More recently hydrocortisone injected into the joint has had its play, but here nothing more can be expected than its analgesic effect for a short time, and nothing more is obtained. The lack of response of hypertrophic arthritis to drugs is understandable when we realize that we do not alter the state of the joint by the use of any of them. When, however, symptoms are helped and the joint change remains the same, it is evident that the symptoms are, in the main, due to associated change which we may be able to alter.

When we consider rheumatoid arthritis, we are considering a truly inflammatory affection of the joints, and whereas it includes but a portion of joint disease referred to as "arthritis," it is the greatest cause of crippling in this group of diseases and is predominantly a disease of young adult life, starting in the vast majority of those afflicted before the age of forty years. We do not

know the cause of rheumatoid arthritis, and although many hypotheses have been advanced to explain its origin, in all there are yet many insurmountable gaps in the evidence presented. The present concept of hypersensitivity seems reasonable but hypersensitivity requires the presence of antigen and antibody, and with the nature of the former totally obscure, the nature of the latter is on insecure ground, particularly when spontaneous remission and relapse are such prominent features of the disease.

Rheumatoid arthritis in its classical form offers no diagnostic difficulty, but the many atypical forms of the disease call into play numerous diagnostic aids. Unfortunately, none of these are in themselves diagnostic, and nothing will replace sound clinical evaluation. The red cell sedimentation rate may be within normal limits in adults in the presence of active rheumatoid arthritis, for it is a phenomenon subject to many influences. If then, it is elevated in the presence of muscle and joint pains, it does not necessarily follow that we are dealing with rheumatoid arthritis. It is the exclusion of variants which gives us the false impression of striking uniformity in the disease and this is not the case at all. In the natural course of the disease, periods of activity are followed by periods of quiescence, to be followed by a return of activity, and the unrelenting progress of the disease goes on. At the present time we can speak only in terms of inducing a remission and not in terms of cure, and until we know how to make a remission, spontaneous or induced, permanent we have no right to speak of more.

In the evaluation of any case of rheumatoid arthritis, the determination of the stage of activity of the disease is the first and most important consideration. It is essential that we differentiate between symptoms produced by active arthritis and those that are the end result of the disease. It is often difficult to tell where active arthritis stops and the results of the previous active disease begin, and it must not be forgotten that both may exist in the same individual. The end result of the disease may vary from the least loss of functional capacity of the joint to the most extensive destructive change, so complete that it makes no difference whether activity of the disease is present or not, there is no function left. In the presence of active inflammation, our problem is to induce a remission as promptly as possible and thereby prevent joint damage and preserve joint function. In the treatment of rheumatoid arthritis, the cause of which we do not know, it is only natural that anything done for the disease, which is followed by a remission, is given credit for that remission, and as invalid as such reasoning may be, it accounts in large measure for the advocacy of so many forms of treatment in the past. Perhaps the removal of foci of infection had the longest sway and has not yet subsided, but, I think, is far spent. When foci of infection are removed from an arthritic, one of three things happens; the arthritis rapidly improves and remains improved; it is made worse and often becomes generalized from a more limited state; or nothing happens and the arthritis remains completely unaffected by the procedure. Unfortunately, the last is the fate of an overwhelming majority of arthritics so treated. It is quite true that one often sees a material subsidence of joint activity following even a minor surgical procedure under a general anesthetic, only to have the joints return to their former state shortly thereafter and continue as before. What influence has been exerted is quite mysterious but this immediate response is in large measure responsible for the enthusiasm of specialists for the eradication of focal infection in their domain, regardless of its extent and duration. They usually see only this immediate response occurring during convalescence from operation and are unaware of the ultimate result.

The procedures attempted and the drugs used to influence the course of rheumatoid arthritis have been large, but with the advent of Cortisone and ACTH the field has been narrowed, for the dramatic action of these two substances has

eliminated many which have been really ineffective, and has reduced the use of others which neither act so rapidly nor with such complete effect. Among those employed in influencing the activity of the disease, salicylates have held and still hold a prominent and important place. Whereas there is no evidence that salicylates ever healed a lesion of rheumatic fever or rheumatoid arthritis, their influence upon rheumatic activity is profound. They are recognized to have an antipyretic and analgesic effect but what other influence they exert on the course of the disease, if any, is not known. The continuous use of salicylates has been advocated in this country and more recently revived by the British, but there still is little evidence that they influence the course of the disease, and its passing into a remission during their use would appear to be only the natural course of the disease, the passing into a spontaneous remission as rheumatoid arthritis sooner or later so regularly does.

The reasoning behind the work of Hench and Kendall and their treatment of rheumatoid arthritis, first with Cortisone and later with ACTH, was a monumental contribution, and aside from the relief afforded sufferers, the discovery bid fair to open up a different concept and a new approach to this baffling disease. Their application to so many abnormal states, in none of which their action is hardly better understood, has tended to deepen the mystery so far as rheumatoid arthritis is concerned. It was reasonable to expect that any substances which would so dramatically alter the inflammatory state of rheumatoid arthritis would soon give some clue to their mode of action, where and how they operated, and thereby indicate in some measure the nature of the disease. All of this doubtless will be disclosed in time and if, as the result of the use of Cortisone and ACTH, their application to the disease will stand among the first of major contributions to medicine. We have, however, been swept off our feet as it were, by these dramatic therapeutic effects and have been too zealous in our efforts to establish the use of Cortisone and ACTH not only as a therapeutic procedure but the procedure of choice. Their prompt alleviating action is subject to the same qualifications that apply to other drugs; they are more efficient in the early stages of the disease; influence only the inflammatory reaction, and may have undesirable effects. Cortisone and ACTH do not cure anything, and in rheumatoid arthritis the activity returns when their use is terminated. If it is possible to employ their suppressing effect with small dosage for a sufficiently long time, the arthritis may go into a spontaneous remission, but there is no evidence that either hormone enhances the occurrence of a spontaneous remission. Withdrawal of Cortisone after long use, may be followed by evidences of hypoadrenalism unless the withdrawal is very gradually made, and it is advisable to stimulate the atrophied adrenals with ACTH as long use of Cortisone is being terminated. We do not decry the use of Cortisone and ACTH, for it is highly desirable to suppress the inflammatory reaction, but we do oppose their indiscriminate use or their use until the indications are clear. Not only is it difficult to avoid the undesirable effects of the hormones, but having once experienced the effects of full dosage, patients usually are unwilling to accept less, regardless of what adverse effect the hormone may be producing.

More recently butazolidin has come into use and it may play an important role in the treatment of rheumatoid arthritis. Its use, however, is subject to limitations as are other drugs, and these are limitations which must be respected. It is a pyrazol derivative and the suppressing effect of this group of drugs upon bone marrow activity is not without real foundation. Its analgesic effect is the most outstanding one, and whereas it also has antipyretic effect, its anti-inflammatory action is not so clear cut. Its greatest effectiveness appears to be its influence upon the pain of rheumatoid spondylitis, or Marie Strumpell arthritis, but like Cortisone the

effect ceases with the discontinuance of the drug. It also has the water retaining property of Cortisone, and a low sodium diet is necessary with its use. Its depressing effect upon bone marrow activity is the important consideration which demands that the blood be carefully followed throughout its use.

Since the discovery of the suppressing effect of Cortisone, the use of gold in the treatment of rheumatoid arthritis has been overshadowed. This was to be expected as it requires from two to three months to initiate a remission with gold in contrast to two or three days with Cortisone. However, gold is the only drug that will induce a remission in rheumatoid arthritis which will be sustained, often for long periods of time, after the drug has been discontinued. Gold has its limitations and is effective only in the active phase of the disease, and has no effect upon the results of the disease. Gold is a heavy metal and may be toxic, but if the state of the kidney, the skin and mucous membranes, and the blood are carefully watched, toxic reactions are detected early and serious ones avoided. Whether it is regarded as remission inducing or merely suppressive in its action will determine whether it is used in courses or in a maintenance fashion. In making this decision, one must balance the likelihood of relapse against the greater hazard of toxic reaction. As toxic reactions do seem to be in direct ratio to the amount of gold in the body, and it is excreted slowly, it has always seemed preferable to us to use it in courses and to put no more gold into the body than is necessary, enjoying the remission induced as long as it is maintained. Furthermore, gold is not so effective the second time it is used unless the interval between its use is a long one, and it has been found that an interval of a year or longer will often make it quite as effective the second time as the first. The remission induced by gold may be just as complete as that resulting from Cortisone in full dosage, but the prompt and dramatic effect of Cortisone is lacking. However, gold may be discontinued without the prompt relapse following the discontinuance of Cortisone, unless by chance a spontaneous remission has occurred during the use of the latter.

It is apparent then, that there is no fixed plan of therapy in rheumatoid arthritis, but that we should be alert to the protean character of the disease and recognize it in its atypical forms and be careful in differentiating it from other conditions which may simulate it. Realizing that we do not know its cause and are quite unable to predict its course, our minds should be open and we must be guided by the exigencies of the individual case.

Nine East Chase Street
Baltimore 2, Maryland

CARCINOMA OF THE LIPS*

GRANT E. WARD, M.D.†

When discussing the diagnosis and treatment of cancer of any organ, it is pertinent to emphasize lesions which may present a differential diagnosis between them and cancer and, also, lesions which may, if not treated early, develop cancer in subsequent months or years. The inclusion of benign and pre-malignant lesions of the lips is similarly important when considering cancer of

Figures I to XII, courtesy of The Williams and Wilkins Co., from *Tumors of the Head and Neck*, by Ward and Hendrick,[10] Baltimore, 1950.

Tables I to V and Fig. VIII, courtesy of C. V. Mosby Co., Surgery **27:** 321–342, 1950, Ward and Hendrick.

With permission of the Williams and Wilkins Co., material from Chapters V and VI, *Tumors of the Head and Neck*, by Ward and Hendrick, has been used freely.

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† One of a series of papers from the Maryland Division of the American Cancer Society that will appear from time to time.

the lips. The surest way of curing a high percentage of cancers of the lips is by early diagnosis and treatment of the benign lesions, particularly those which predispose to the development of cancer.

Hyperkeratoses and Leucoplakia

Hyperkeratosis and leucoplakia are similar processes. Hypertrophy and hyperplasia of the epithelium of the vermilion border of the lip appear as dry scaly patches most commonly in men whose work exposes them to the weather; as firemen, policemen, watermen, and so forth, and is frequently associated with hyperkeratosis of other areas of the skin of the face, neck, and hands. This condition rarely occurs in women. Should the hyperkeratosis extend onto the mucous membrane lining the lip, it assumes a white patchy appearance with a more or less mosaic pattern and is then called leucoplakia. Because the mucous membrane is constantly moist with saliva, the hyperplastic epithelium does not peel as when dried on the skin, but remains as a flat whitish area. As these processes continue, the skin of the lips becomes thicker and indurated. Therefore, any examination must include palpation of the lip between the thumb and fingers to detect such thickening. In our series of 259 patients with cancers of the lip, 17 patients had leucoplakia and 25 had hyperkeratoses, a total of 42 or 16.2 per cent.[8]

Under the microscope hyperkeratosis and leucoplakia appear indistinguishable. There is marked hypertrophy of the squamous epithelium in the form of rather hyalinized scales which, in the case of hyperkeratoses, have a tendency to peel off. In the patients where there is cellular activity within the epithelium, one should be more suspicious of malignant change later on. Rete-pegs are elongated, but the basal layer is not broken. In some there is lymphocytic infiltration below the epidermis.

Treatment

In the early stages of hyperkeratosis the application of mild ointments, such as vaseline or white oil, to the lips often will soften and heal

Fig. 1. *A*) Elderly man with hyperkeratosis on the vermilion border of the lip and leukoplakia on the mucous membrane side. Note how the two processes blend together and really are indistinguishable. *B*) Photomicrograph of leukoplakia.

the lesion. If the scales are rather thick and show tendency to produce excoriation, active treatment is indicated. Many of these are cured by electro-desiccation under local anesthesia. Some clinicians prefer irradiation. One must observe, however, that further scaling and damage may not occur after irradiation.

When the process involves the entire vermilion border of the lip, the vermilion border should

FIG. 2. Leukoplakia and hyperkeratosis of the lower lip. Note the piling up of leukoplakia on the mucous membrane side of the lip almost to papillary formation.

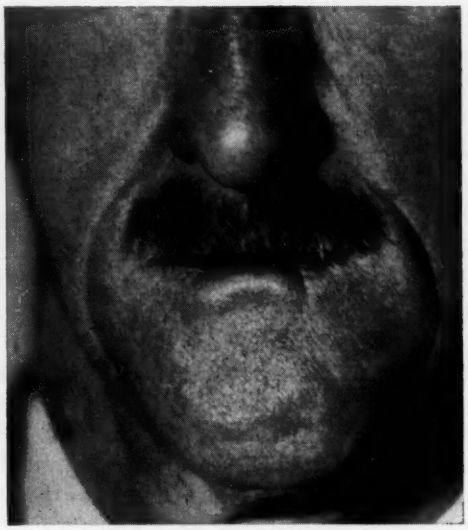

FIG. 3. Chronic fissure of lower lip

be excised by a long eliptical incision from one commissure to the other, including the entire vermilion border. The mucous membrane on the inner side of the lip is then freed and brought forward to be sutured to the skin edge.

FISSURES

Fissures in the lips are quite common, and similar to hyperkeratosis, occur more frequently in people exposed to the elements. These fissures may occur anywhere on the lip, most commonly on the lower and frequently in the midline. They may be the forerunner of malignant disease.

Treatment

Local excision and suturing. The specimen is sufficient for good accurate microscopic study to determine the absence or presence of frank cancer.

CHEILOSIS—AVITAMINOSIS—PERLECHE

Vitamin deficiencies cause certain changes in the lips which bear mention in order to differentiate from early cancer. According to Martin and Koop,[3] "Neither perleche nor cheilosis are precancerous lesions in themselves, but they usually indicate the presence of other degenerative changes within the mouth on the tongue or cheeks, which at these sites are precancerous." The treatment of these conditions is correction of vitamin deficiency, most commonly a deficiency of the Vitamin B complex.[4]

VERRUCA (WART)

Solitary warts are occasionally seen on the lips, both upper and lower, but most commonly on the lower lip. Their clinical significance is in

FIG. 4. Benign wart of lower lip readily removed with electro-desiccation under local anesthesia. Any induration of the base requires removal with biopsy forceps before electro-desiccation.

FIG. 5. Benign wart of lower lip. This type is treated by removal with V-excision for microscopical examination and wide removal.

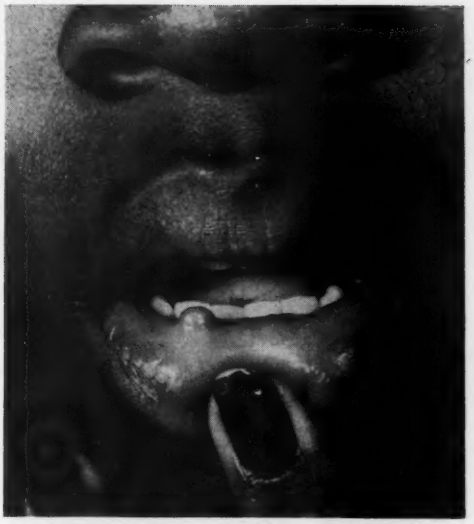

FIG. 6. Localized hypertrophy of the mucous membrane. This is a benign lesion and probably due to chronic trauma. The mucous membrane over it is normal. The bulk of the tumor is made up of connective tissue and fibroblasts carrying blood vessels.

the differential diagnosis of early carcinoma and in their early removal to prevent malignant change. Their treatment is either thorough and wide electro-desiccation or better, excision under local anesthesia for microscopic examination as well as therapy.

EPITHELIAL PAPILLOMA

Squamous cell papillomas are not uncommon on the lip; and may, if not treated early, develop into squamous carcinoma. They may attain a considerable size appearing as a large horn. The hornified portion consists of desquamated keratinized squamous epithelium and dried saliva. When this hornified cap is removed, an actively growing papillomatous base is found. Treatment is by V-shaped excision and suture.

LOCAL HYPERTROPHY OF THE MUCOSA

Hypertrophy of the mucous membrane of the lip occurs as a result of trauma from biting the lips, a malfitting denture or an irregular tooth. The source of the trauma should be removed and the lesion excised with electrosurgery or scalple and the wound sutured. Chronic irritation is one of the deciding factors in the development of carcinoma of the lip. I remember one man whose carcinoma began in the laceration made by eating pie with a knife. Another shoemaker held his nails between his lips. Probably the most common types of trauma to the lips is, as has been already mentioned, exposure to the elements and poor dental hygiene.

MUCOCELE

Mucous cysts occur commonly on the mucous membrane of the inner side of the lip and are to be differentiated from cancer. They usually have a bluish hue from the contained clear saliva and are covered with normal mucosa unless traumatized. They are soft and globular. Treatment is surgical excision or thorough electro-desiccation after evacuating the fluid.

ABERRANT SALIVARY TISSUE TUMORS

These occasionally occur on the lips as rounded firm discrete painless nodules covered by normal mucosa or skin. They may be associated with considerable dilatation of the blood vessels suggesting a combination of hemangioma and sali-

FIG. 7. Patient, white male aged 48 years, states while eating corn with a fork he stuck his lip; lesion did not heal. *A*) Elevated lesion 1.5 x 1 cm. on the lateral third of lower lip. Palpable nodes in submental area, left side. Biopsy: squamous cell carcinoma, Grade II. *B*) Wedge-shaped excision of tumor with suprahyoid neck dissection on left side. Lymph nodes positive. No reccurence of this lesion. Returned 2 years later with carcinoma, right side of lip.

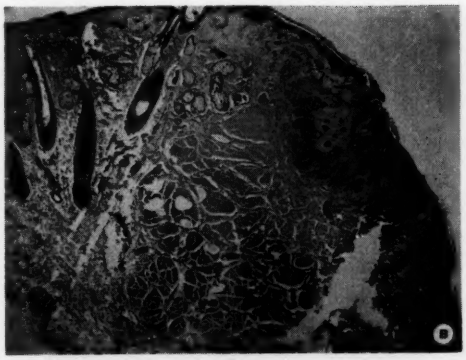

FIG. 8. Low power photomicrograph through entire thickness of lip. Leukoplakia on right is typical hypertrophy of squamous cell epithelium with downgrowth of rete pegs. In right center is the earliest squamous carcinoma that we have encountered.

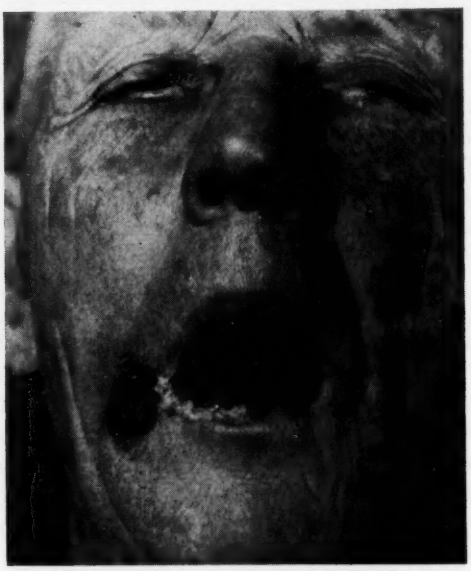

FIG. 9. Patient, white male aged 68 years. Leukoplakia on mucosa and papilloma in commissure, right side. Both had been present five years. Squamous cell carcinoma found on microscopic examination.

vary tissue. Treatment is surgical removal and proper reconstruction.

HEMANGIOMAS

These occur quite frequently on the lip, particularly in infants. Like hemangiomas elsewhere in the skin, they may be present at birth or very shortly thereafter, usually appearing within the first two or three weeks of life. The surface is covered with thin epithelium, more or less smooth and glistening. They blanch on pressure and are compressible. They are found on either upper or lower lip. Ward and Covington[9] found

FIG. 10. White male, aged 70 years. Epithelial wart on lip, eight years, began to grow rapidly resulting in papillomatous type of growth measuring 2 cm. in diameter. Biopsy: squamous cell carcinoma, Grade I.

in 127 hemangiomas 11.8 per cent occurred on the lips.

Occasionally a very vascular granuloma appears following trauma. Some pathologists call these hemangiomas that are infected, others call them vascular granulomas. They are hard to distinguish from one another, except by history. They appear as cherry-like red lesions which bleed easily.

The ordinary congenital hemangioma is usually treated with radium if there is much interference with nursing. Many hemangiomas disappear spontaneously after the child becomes 4 or 5 years of age. However, should there be any tendency to increase in size, some form of therapy is mandatory. Radium treatments must be given carefully in small doses to obviate injury to the tooth buds.

A hemangioma, secondary to injury, should be excised by a V-incision, or thoroughly electrodesiccated.

FIG. 11. *A*) Fungating carcinoma, upper lip; duration 3 months. Biopsy: squamous cell carcinoma, Grade III. *B*) Lesion treated with x-ray (6000 r). Deformity of upper lip. Lip lesion remained well. Later leukoplakia appeared on upper alveolus on same side which developed carcinoma. *C*) 18 months later, metastases. Postauricular nodes demonstrating wide distribution of metastases from upper lip.

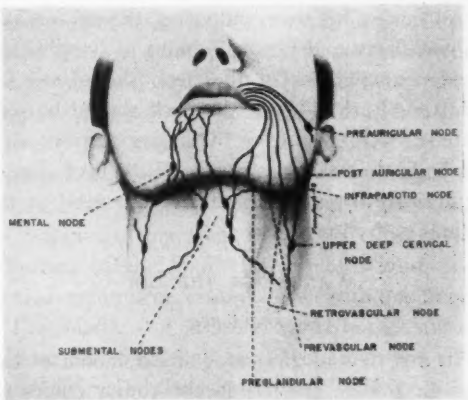

FIG. 12. Anatomy of the lymphatics of the lip. Note the wide distribution of the lymphatics from the upper lip and the commissures; also that the lymphatic trunks from the lower lip enter the mental foramen. (Redrawn from Rouviere. Edwards Publishing Company, Ann Arbor, Mich.)

Granulomas, Traumatic and Pyogenic

Acute trauma causing a break in the vermilion border of the lip often gives rise to a rapidly growing vascular easily bleeding tumor. Microscopically it is difficult to differentiate from hemangiomas. These heal well following surgical excision or electro-desiccation.

Examination of the Lips

Careful examination of the lips is important in making a diagnosis. The lip should be everted and the mucous membrane lining carefully scrutinized. All lesions of the lip should be palpated, a procedure as essential when examining the lips as when examining the abdomen. Often induration beneath an area of keratosis or around a fissure or beneath a wart or papilloma may be detected by palpation and early cancer suspicioned. Adequate excision not only serves to cure but to make an accurate diagnosis by microscopic examination. In larger lesions the extended disease through the lip beneath the mucous membrane or along the mucous membrane or skin may be detected by palpation which otherwise would have been overlooked by inspection alone. Also, it is important to palpate the lymph nodes. The physician should develop a routine of his own, palpating the submental, submaxillary and cervical chains of lymphatics. Posterior triangles of the neck should not be omitted. Both sides of the neck should be palpated. Metastases from malignancy in one side of the lip to the opposite side of the neck occurs sufficiently often to emphasize the need of bilateral palpation.

Cancer of the Lip

Incidence

In a review of 259 cases of carcinoma of the lips that were treated in the tumor clinics at Johns Hopkins University and University of Maryland Hospital and in private practice, January 1, 1926, to January 1, 1945, Ward and Hendrick[8] found that the majority occurred in males, there being 251 males and 8 females. The age instance ranged from 20–80 years plus. The largest number in any one decade was 73 cases between the ages of 60 and 70 years. From 40 to 80 were the years in which most cases occurred. Cancer of the lips is seen more commonly in the white than in the colored race, possibly due to the protection afforded by the increased amount of pigment in the skin of the colored.

Etiology

Cancer of the lip, as cancer of the skin of the hands and face, is more frequently found in individuals with thin dried skin without much pigment, especially when exposed to the elements, wind and intense sunlight.

Formerly, the use of tobacco was thought to be an important etiological factor. In the current medical literature, some question as to the etiological relationship of tobacco to cancer of the lip is being raised. Eighty-seven per cent of the patients in our series smoked, an approximate percentage of smokers encountered in the male population. Since, however, smoking is a form of trauma, both by heat and by chemical irritation, it is important that every patient with cancer of the lip stop the use of tobacco. In like manner, any other form of trauma such as ill-fitting dentures, and ragged teeth, must be eliminated.

As has already been pointed out, keratosis, leucoplakia, warts, chronic fissures, and papillomas are frequently precursors of cancerous lesions. Syphilis apparently plays little part in the etiology of cancer of the lips. However, when syphilis does co-exist with cancer of the lips or oral cavity, as a matter of fact, prognosis is much worse than with cancer alone.

Anatomy and Histopathology

It is generally accepted that cancer of the lip is defined as cancer of the vermilion border only. All of these cancers are squamous cell in the histological type and vary from well differentiated Grade I to highly anaplastic Grade IV. When a basal cell lesion is present on the lip, a

careful history and examination will disclose that it began on the skin of the lip and extended onto the vermilion border.

In histological grading of cancer of the lip, one must be exceedingly careful to examine many parts of the cancer as there may be a variation from a low Grade I to a more malignant type of Grade II or III in the same tumor.

In our series of 259 cases, the lower lip was involved in 239 and the upper lip in 20 or 7.7 per cent. Cancers occur in about the same percentage in the three areas of the lower lip; namely, the central third and the two lateral thirds. The commissures are infrequently involved, being the seat of a malignancy only 22 times in this series. Cancers of the commissures of the lips are thought by many observers to be more difficult to control because of their rapid development and extend along the mucosa of the inner side of the cheek.

Multiple cancers are seen on the lips occasionally. There were six cases out of 259 that had two distinct lesions, all occurring on the lower lip at the same time. One case had three cancers of the lower lip simultaneously.

Lymphatics of the Lip

Anyone who attempts to evaluate a patient with cancer of the lip or to treat him must be familiar with the lymphatics of the lips. The lymphatics of the upper lip drain into the preauricular nodes, the post-auricular nodes, infraparotid nodes, and upper cervical nodes. They also may pass around the commissures of the lip into the submental and submaxillary nodes. The lymphatics of the lower lip drain into the submental, submaxillary nodes, and then into the carotid chain down the neck.

It is interesting that in 9 of our cases secondary deposits were found in the mandible and in each case, only a small node was noted in the submaxillary or submental area. This draws attention to the fact that the lymphatics also drain through the mental foramen into the jaw in a certain percentage of patients.

Diagnosis

Since cancer of the lips is accessible, and every person observes his lips frequently, early diagnosis should be made. Unfortunately, cancer of the lips is not painful; pain is the one symptom that sends a certain group of patients to the physicians for relief. The general public should be aware of the danger of any alteration in the appearance or consistency of the lips. Although ulceration, elevation of a papilloma, or induration around a fissure should draw a suspicion of a malignancy, final diagnosis is by biopsy. Small lesions should be excised adequately for microscopic examination. This procedure in most cases will cure the patient. Larger lesions require biopsy with suitable biopsy forceps or by incisional technique. There is no excuse for inaccuracy in the diagnosis of the cancer of the lip for biopsy is easily accomplished under local anesthesia. Its advantages are obvious.

As stated above, all lip lesions should be palpated between the finger and thumb to ascertain the consistency. Firmness to hardness is suspicious of malignancy.

The prognosis and treatment of cancer of the lips varies not only with the size and histological grade and duration, but also by the presence or absence of metastases to the adjoining lymph nodes. It is estimated that about 50 per cent of normal people have palpable lymph nodes in the submaxillary, submental and carotid bulb areas. Therefore, diligence must be exercised by the examiner to properly interpret the significance of palpable lymph nodes. In addition to palpating the lymph bearing areas of the neck, bimanual palpation of the floor of the mouth and submental region is necessary. Often with one finger in the mouth and another beneath the jaw or chin, small nodes may be detected. In the submaxillary region the submaxillary salivary gland must be differentiated from a lymph node. The normal submaxillary salivary gland is a soft oval mass beneath the middle of the lower jaw, one on each side. Any hardness within it should be viewed with suspicion until proven negative.

Normally, there is a node in front and in back of the external maxillary vessels where they cross the mandible. These can frequently be detected by lifting the soft tissues of the submaxillary triangle up over the mandible. In so doing, the nodes are brought up beside the mandible and slipped back beneath the fingers or may be held against the jaw and studied. Especially when the cancer involves the upper lip, the pre- and posterior auricular and infra-parotid regions must be examined, also.

Normal nodes are soft, movable, discrete, and non-tender. Nodes involved by sub-acute or chronic inflammation are usually tender and firm. Acute inflammations may produce large nodes which are painful, often fixed, and may be associated with skin erythema and occasionally increased local temperature. Acutely inflamed nodes seldom produce problems in differential diagnosis.

Malignant nodes in early stages are discrete, movable, elastic in consistency, or hard; but as the pathological process continues, the capsule of the node is permeated by malignant cells and the surrounding fascia invaded. Round cell infiltration associated with chronic inflammation and extension of the growth into the fascia cause moderate or firm fixation to surrounding structures. When this occurs, the diagnosis is obvious. In the early cases there is no absolute clinical method of being certain of the presence or absence of malignant cells in the nodes. Small nests of malignant cells in the nodes complicated by infection from oral sepsis will confuse the diagnosis. Not infrequently, the nodes at first swell because of infection and then reduce, leading to the dangerous assumption that there is no associated metastatic cancer. Therefore, any enlarged firm node in the neck, draining the area of cancer in the oral cavity or lip, should be looked upon as malignant metastasis until proven otherwise.

On admission 119 or 44 per cent of our cases had palpable nodes and 52 or 19 per cent of the nodes were described as being firm, hard, and immobile.

Evaluation and Classification of Cases

Carcinoma of the lips as well as carcinoma of other parts of the body, having had no previous treatment, behave quite differently from those that have been treated by inadequate surgery, or inadequate radiation. Whatever modality is used, surgery or irradiation, the important factor is the thoroughness with which the therapy is carried out. Many surgeons give an inadequate margin to a lesion because of the desire for good cosmetic results. Many radiologists skimp on the margin, and recurrences develop at the edge of the growth, or an inadequate dosage is given. The man most responsible for the cure of cancer of the lip is the one who first sees the patient or attempts to treat the disease. Because of the inadequacy of previous treatments, we have found that the end result of cases previously treated are not as good as those that are primarily treated adequately.

Other factors in the classification of cancer of the lip, besides the histological picture, are the size of the lesion, the rapidity of growth, the duration, and the absence or presence of palpably enlarged lymph nodes. These factors are emphasized in the accompanying tables.

Treatment

In choosing the treatment for any lip cancer, it is necessary to consider separately the treatment of the primary lesion and the treatment of the cervical deposits if present. Also, the question of previous treatment, if any, should be evaluated as to its effect on increasing the tumor resistance to further irradiation or to altering the histological picture. It is probable that early and very small lesions of the lips can be eradicated either by surgery or by irradiation, if both modalities are employed efficiently. Any statistics which are not based on biopsy are valueless. It is generally conceded by surgeons and radiologists alike that surgery is the method of choice for cancer which has involved the lymph nodes.

Surgery

When the primary cancer is under 1.5 to 2 cm. in diameter and does not infiltrate the lip deeper

than 1 to 1.5 cm., it may be removed by a wide V-shaped incision. Care must be exercised that the incision extends well beyond the growth for at least a centimeter on each side and carried down to the reflection of the mucous membrane of the gingivo-labial sulcus. In closing the defect, the mucocutaneous junction on each side must be accurately approximated to give a good cosmetic and functional result. If the growth is of low histological grade and there are no enlarged nodes in the drainage area, routine neck dissection is not done.

Lesions of the lower lip that involve the central third or central half and which have not infiltrated the entire depth of the lip, also respond favorably to a wide V-excision. The removal of such a wide section may present difficulties in closure without some form of flap shifting procedure and, even then, is apt to make the lower lip short. There are many operative techniques for closing such large operative defects with minimal shortening of the lip. For descriptions of these procedures, one should consult more extensive treatises on the subject.

Other tumors of the lower lip involving the central third or half and extending deeply into the lip or perhaps as far as the jaw require still more extensive operations. Often, there is a zone of induration from inflammatory reaction or previous irradiation therapy requiring the removal of a very large rectangular piece of tissue. Here again the shifting of properly constructed flaps from the cheek or upper lip will give adequate closure and a satisfactory function of the mouth. Sometimes these procedures must be done in stages, but usually one operation suffices to eradicate the disease and reconstruct the oral orifice.

Lesions of the commissures, when small, are removed with wide excision and adequate reconstruction giving a good functional mouth. However, the great danger with these lesions is the extent that they may have reached on the buccal mucosa and skin of the cheek. Those lesions which are limited to the soft tissues of the lips and cheek are surgically removed and the defect closed with the proper reconstructive procedures. Many large tumors of this type are first treated by irradiation and excised in six to eight weeks after completion of the therapy. Often by this time the tumor has shrunken markedly and surgical removal is possible.

More extensive cancers of the lip, which have involved the mandible, either on one side or the other or in the symphysial region, may require removal of the jaw and more elaborate methods of closure. One might assume that in these extensive cases irradiation therapy is preferable to surgery. Occasionally, it may be. However, heavy enough therapy to destroy cancer in the bone will bring about radio-osteonecrosis; and the mandible, sooner or later, will have to be removed. The treatment of each patient must be decided on its own merits by one who is familiar with irradiation therapy and surgery, their shortcomings and their assets. Time does not permit a detailed discussion of every variety of patient with cancer of the lip.

The upper lip is less frequently involved by malignant disease than the lower lip. In treating cancer of the upper lip, problems of reconstruction are somewhat more complicated than when treating cancer of the lower lip. Small lesions are excised with the same facility and cosmetic results with the V-shaped incision as in removing similar growths from the lower lip. Should the deformity be large, tissue may be shifted into place from the adjoining cheek or from the lower lip with adequate reconstruction and a balanced mouth although sometimes reduced in size.

Treatment by Irradiation

As mentioned above, small cancers of the lip which have not penetrated the musculature of the lips to any great extent are eradicated by proper irradiation with sometimes little defect. Occasionally, because of the physical condition of the patient, either due to disease or age, irradiation is preferable in these smaller lesions to surgery. Properly carried out techniques also eradicate larger lesions, sometimes with or without defects which may require surgical recon-

struction later on. Techniques and dosage of irradiation therapy will not be given here because of lack of space and because they are better discussed in more elaborate writings. Emphasis cannot be too strong on thorough and adequate irradiation at the first series of treatments. The therapist should give as large a border to the growth as the surgeon in resecting. In England and on the continent of Europe irradiation therapy for accessible cancer has been developed to a much more satisfactory degree than in the United States until recent years. With the improvement in radiation techniques and control by biopsy, it is quite possible that there will be an increase in the percentage of cure of the local growths by irradiation therapy.

The treatment may be given by radium placques or moulages holding radium tubes or the implantation of radium element needles or radon seeds into the tumor. Careful protection of the teeth and gums to obviate radio-osteonecrosis and loss of teeth is imperative. Perhaps the most common method of irradiation therapy is the roentgen ray. X-ray therapy is less time consuming, both to the patient and the therapist, and applied with greater ease and less likelihood of extensive sloughs and infection.

Reference to Table V will show that in our series surgery had about a 10 per cent better 5 year result in treating the local growth than irradiation therapy.

It should be mentioned that, not uncommonly, extensive growths which have been eradicated by irradiation produced large defects. Subsequent surgical closure of the defect was required. It seems then that primary surgical removal in such cases would have been preferable and have given the patient a good functional result much more quickly than the combination of the two procedures.

Treatment of Cervical Metastases

Since a high percentage of primary cancers of the lip are curable, it is quite evident that death is from metastatic deposits in the nodes. Adequate treatment of the primary lesion in the early stage reduces the likelihood of metastatic emboli breaking away from the parent tumor and reaching the node. Consequently, the best prophylaxis against metastasis is adequate treatment of the primary growth. The treatment of lymph node metastasis from lip cancer is radical neck dissection and not local surgical removal, of a few of the nodes. The difficult problem is to know what procedure should be followed when the lymph nodes are not palpable. Table I shows results of a study made by Ward and Hendrick of the relationship of histological grading to lymph node involvement or recurrence.

TABLE I

Lymph Node Involvement

	Number	Per cent
Primary group, 180 cases		
Palpable nodes	75	41
Neck dissections	53	29
Nodes resected positive	23	43
Local recurrence	15	8
Recurrence in nodes	35	19
Died of cancer 0 to 7 years	23	
Secondary group, 79 cases		
Palpable nodes	44	55
Neck dissections	47	59.5
Nodes resected positive	29	61
Local recurrence	7	9
Recurrence in nodes	25	31
Died of cancer 0 to 7 years	23	

Dr. Hayes E. Martin[5] reports from the Memorial Hospital in New York that of all cases of lip cancer without palpable nodes when first seen, 8 per cent will sooner or later develop metastasis in the lymph nodes. In other words, these 8 per cent either had microscopic involvement on admission or metastasis occurred during the treatment of the primary tumor.

A good working program is as follows (taken from Ward and Hendrick): When the lip tumor is under 2½ or 3 cm. in diameter and of low histological grade (Grade I) with no palpable nodes in the submental or submaxillary areas, routine suprahyoid neck dissection is not advised. Lip cancers under 2 cm. in diameter and

of a higher histological Grade (II, III, or IV) without palpable nodes in the submaxillary and submental areas, are not advised to have a routine suprahyoid neck dissection. Such patients as well as those of Grade I are observed every 2 months for the first year and every 3 months for the subsequent year, and every 4 months thereafter for a period of 5 years, at least. When nodes enlarge in either of these two groups, suprahyoid dissection is done immediately.

Lesions over 2 cm. in diameter having a history of short duration with rapid growth and of histological Grade II, III, or IV, even though no nodes are palpable, should have routine suprahyoid neck dissection. Mortality from routine suprahyoid neck dissection as a prophylactic or curative measure is very low, and the cosmetic results are good. Mortality for all surgical procedures in this series, including a number of very extensive operations was 1 per cent.

Neoplasms of Grade I and over 3 cm. in diameter, having no palpable lymph nodes in the drainage area, should have the routine suprahyoid neck dissection. These large cancers even though of low histological grade are usually long standing and more likely to have microscopic metastasis in the lymph nodes.

Malignant growths involving the central third of the lip with nodes that are palpable on one or both sides require bilateral suprahyoid neck dissection. However, when the tumor is limited to the lateral third of the lip and the large firm nodes are palpable on the side of the growth, the suprahyoid neck dissection is limited to the involved side. When the nodes are found by frozen section to contain cancer, the neck dissection should be extended to include all nodes in the neck, that is, a radical neck dissection. This is done by one of two procedures: the dissection is continued downward to the crossing of the jugular vein by the omo-hyoid muscle, a simpler and less radical procedure (Willy-Meyer), or a complete radical neck dissection down at the clavicle is carried out (Crile and Bloodgood). In the event that the positive nodes are found in the suprahyoid resected specimens from both sides of the neck (primary growth in the center of the lip), a radical neck dissection should be done on both sides. If such a bilateral radical neck dissection is contemplated, it is a safer procedure to space the operations six or eight weeks apart. We have followed this plan of handling cervical metastases for several years and have been rewarded by a substantial number of patients living without recurrence for periods of five or more years following such treatment.

Patients with extensive metastases to one side of the neck, which may or may not be fixed to the surrounding tissue, usually are treated with X-ray irradiation to skin tolerance followed by implantation of radon seeds as indicated by residual masses. Occasionally when a large metastatic mass is limited to the upper neck, subsequent electrosurgical removal en bloc may be carried out. When the jaw and structures of the floor of the mouth or other contagious parts are adherent to the mass, these structures are removed in the bloc dissection. Plastic reconstruction, of course, is necessary.

An extensive inoperable metastasis is often palliated by irradiation therapy either by X-ray or implantation of radium element needles or radon seeds.

Although we believe that resection of the lymph node bearing area of the neck when lymph nodes are not palpable, is in selective cases the method of choice when the primary lesion is in the tongue or floor of the mouth, tonsil or buccal surface, with cancer of the lip where metastasis is slower and to a less percentage, routine neck dissection is not indicated except as mentioned above.

Ewing, in 1940, stated that "metastatic invasion of lymph nodes in lip cancer occurs rather late and shows a close relationship to the size of the lesion and a grade of malignancy. Invasion of submental and submaxillary nodes occurs primary to invasion of deep cervical nodes." (Quoted by A. F. Tyler, 1942).[7] Further, Ewing states that metastatic nodes develop in 2 per

cent of the lesions of 1 to 1½ cm. in size early in the course of the disease. He reports that 4 per cent of 276 lesions had metastasis from one to seven years after the onset of illness. There are 13 per cent metastasis late in the course of the disease. Broders (1920)[1] found that there were 11 per cent metastasis in Grades I and II and 66 per cent metastasis in Grades III and IV. He concluded that routine neck dissection was not necessary in Grade I carcinoma of the lip. Whitcomb (1944)[11] stated that metastasis to regional lymph nodes occurs in 25 per cent of any series of cases.

The question of distant metastases from carcinoma is always an interesting one. William S. McComb,[2] reporting from the Memorial Hospital in New York, July 1942, stated that out of 13 autopsies only two had distant metastasis and six out of 13 autopsies showed regional metastasis. Death in these cases occurred from lip cancer or other causes but having active lip cancer at the time of death. Schreiner[6] holds that metastasis to the viscera almost never occurs except in hopelessly advanced cases. He found that the thoracic and abdominal metastasis were present in three of 17 autopsies following death from lip cancer. This gives a visceral metastases of about 17.6 per cent.

Follow-Up

It is exceedingly important that patients with cancer of the lip be followed for at least five years. I have seen recurrence in the nodes as late as seven years after cure of the primary disease. A good plan is to see the patient every two months for the first, every three months for the second, and every four months for the third, fourth and fifth years. One should not only examine for recurrence locally, but for enlarged cervical nodes. When they are detected, immediate removal is indicated.

End Results

In evaluating end results of treatment in any series of cases, one must consider accuracy of diagnosis, evaluation of the lesion, methods of treatment, and other variables. Ward and Hendrick's series of 259 histologically proven cases of carcinoma of the lip is all inclusive. That is, all ambulatory patients who presented themselves with cancer of the lip were included in this series, if the patient accepted treatment and was willing to cooperate, even though the treatment may have been only palliative. Both primary and recurrent cases were admitted to the study. Dr. R. V. Rider, biostatistician of the Johns Hopkins Hospital, directed the use of definite criteria to record the results for statistical purposes.

This series of cases began January 1, 1930, and extended until December 31, 1944, permitting three year and five year follow up periods. The three year and five year periods of freedom of disease are defined as ones in which the patient has remained free from recurrence for at least a period of three or five years respectively following the last treatment. As stated previously, this series was divided into primary and secondary groups. The primary group included only those who had received no previous treatment before consulting out clinics. The secondary group was made up of patients who were treated elsewhere with radium, X-ray, surgery, electrosurgery, or a combination of these modalities. In the accompanying tables (II to IV) the relationship of size of the lesion to curability, the relationship of the histological grade to recurrence, and the relationship of histological grade to curability are given.

TABLE II

Relationship of Size of Lesion to Curability

Size of Lesion in cms.	Primary Cases			Secondary Cases		
	No. cases	3 yr. cure	5 yr. cure	No. cases	3 yr. cure	5 yr. cure
		%	%		%	%
Under 1	74	97	95	1	100	100
1–2	60	83	80	24	76	71
2–3	27	64	59	31	61	54
Over 3	19	49	41	23	44	41
Total.....	180			79		

TABLE III

Relationship of Histological Grade to Recurrence

Grade	No. Cases	Recurrence in Nodes
	%	%
Primary group (180 cases)		
I	85–48	8–9
II	67–38	14–20
III	19–8	9–47
IV	9–4	5–55
Secondary group (79 cases)		
I	22–27	2–9
II	37–46	10–25
III	13–16	8–60
IV	7–9	5–70

TABLE IV

Relationship of Grade to Curability

Grade	No. Cases	3 Year Cure
		%
I	107	93.4
II	104	81.4
III	32	45.5
IV	16	38.2

TABLE V

End Results All Cases Treated

	Number	Number 3 Year Cures	Number 5 Year Cures
		%	%
Total	259	74.5	70.1
Primary group	180	76	72.1
Surgery	72	93	89
Irradiation	69	81	79
Combined	39	58	51
Secondary group			
All methods	79	66	64

Also, in Table V there is a summary of the end results of all cases treated.

In Table II it will be seen that in the primary group of 180 cases, 74 or 41 per cent were under 1 cm. in diameter; and there was a 95 per cent non-recurrence after five years. In the slightly larger lesions, from 1 to 2 cm. in diameter (60 cases or 33 per cent of the group) the five year salvage dropped to 80 per cent. It will be noted that lesions that were over 3 cm. in diameter and oftimes involving half or more of the lip, showed a five year non-recurrence of only 41 per cent. Similarily in the secondary group the size of the lesion predicted the non-recurrent rate. Note that there is an appreciable drop in the three and five year cure rate of the secondary cases which had been inadequately treated previously, emphasizing the importance of thorough treatment early in the course of the disease.

Also, note that the number of metastasis as indicated in Table I in the secondary group was considerably higher than in the primary group. This indicates that the delay in curing the primary lesion increased the number of metastatic deposits.

Table III illustrates the relationship of histological grade of the tumor to recurrence in the nodes. It is quite evident that the higher the grade, the more malignant the tumor, and the more rapid the metastasis. Hence, it is necessary in the higher grades to do a neck dissection as mentioned above. Table IV gives the relationship of the histological grade of the tumor to curability. The lower the grade, the higher the curability; and the higher the grade, the lower the curability. Grade I yielded 93.4 per cent three year non-recurrence, whereas, Grade III yielded only 45.5 per cent, and Grade IV, 38.2 per cent.

In evaluating end results consideration must be given to many variables. The end results must be based on three and five year non-recurrence, deaths from surgical procedures and treatment, cosmetic results, and the choice of a safe treatment for the individual patient. In the above mentioned series, the three year non-recurrence in the entire series was 74.5 per cent. Five year non-recurrence was 70 per cent (Table V). Attention is called to the fact that in the primary group of 180 cases there was a 76 per cent three year non-recurrence and a 72 per cent five year non-recurrence as contrasted to the secondary group of 79 cases with a 66 per cent three year survival and a 64 per cent five year survival

without recurrence. Surgical treatment alone in a limited number of patients gave a non-recurrence rate of 93 per cent after 3 years and of 89 per cent after 5 years. Sixty-nine cases in another group treated with irradiation yielded 81 per cent non-recurrence in three years and 79 per cent non-recurrence in five years. These figures tend to show that surgery offers a 10 to 12 per cent better result than treatment with radiation. In these two small groups of cases treatment was selected after evaluation of the lesion and choice made according to what was thought best for each individual patient. It is to be recalled that the judgment in these cases varied probably because there were several radio-therapists and several surgeons managing these cases as they came into the hospitals. Many were treated by the resident staff. These factors were true in both those cases treated with irradiation and those treated by surgery so that the two series are fairly comparable.

In a third group of 39 patients it was necessary to combine the treatment of irradiation and surgery, probably because of the extent of the tumor. Fifty-eight per cent of these patients had non-recurrence in three years and 51 per cent went five years without recurrence. The lower percentage of survival here is probably due to the fact that these were extensive at the beginning or were refractory to whatever method of therapy was used first.

15 East Biddle Street
Baltimore 2, Maryland

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CHRONIC RHEUMATIC DISEASE

Clinical Evaluation of a Topical Methyl Salicylate Compound*

C. A. BRUSCH, L. A. GRASSE, P. N. PAPAS and T. A. LAMPHIER†

Salicylates are used widely as antipyretics and analgesics. Their continuing use and efficacy in rheumatoid arthritis has become overshadowed by the advent of the steroids and certain synthetic drugs as well as gold therapy.

* From the Department of Arthritis and Rheumatism, Brusch Medical Center, Cambridge, Massachusetts. Submitted October 28, 1955 for publication in The Maryland State Medical Journal.

† Charles A. Brusch, M.D., Medical Director, Brusch Medical Center; Lewis A. Grasse, M.D., Department of Arthritis and Rheumatism, Brusch Medical Center; Prodromos N. Papas, M.D., Clinical Professor Emeritus, Tufts College School of Medicine, and Teaching Assistant Harvard Medical School; Timothy A. Lamphier, M.D., Physician, St. Elizabeth's Hospital, Carney Hospital, Newton-Wellesley Hospital, Faulkner Hospital, and Booth Memorial Hospital.

TABLE I

Types of Cases Treated

Rheumatoid arthritis	71
Osteoarthritis	72
Bursitis	11
Neuralgia	12
Lumbago	11
Muscular pains and sprains	34
Total	211

Warter[1] has stated that no patient with rheumatoid arthritis should be deprived of the use of salicylates.

Anti-rheumatic agents frequently are combined with methyl salicylate and used topically as counterirritants. The methyl salicylate in these agents apparently affords comfort by helping to depress pain centers. It has been found that the joint fluid of rheumatic patients contains no free salicylic acid following the local application of methyl salicylate.

This study was conducted to determine whether objective evidence could be established demonstrating the possible value of local analgesics and counterirritants in the management of chronic arthritis. It is believed that such a study is of particular importance to patients requiring special care directed to individual joint regions for the prevention and correction of crippling deformities.

The local and systemic effects of two types of topical applications on pain and function were studied in 211 test subjects. Patients included in the study were suffering from either arthritis, rheumatism, or an allied disease of the joints and muscles.

The study covered a period of approximately seven months. The media used were a compound of methyl salicylate, menthol and lanolin preparation labeled B,‡ and a bland preparation containing capsicum, labeled C. The testing physicians were primarily interested in (a) determining changes in articular function or degree of mobility; (b) lessening or elimination of pain, and (c) decrease of swelling after topical application of the preparations.

Employing controlled conditions, the effects of ointments B and C were compared. Physical therapists working with physicians made each of the applications to the affected areas.

Prior to the study, each patient had been under observation with diversified treatment for varying periods of time. The majority of cases had been treated previously with ACTH, cortisone, butazolidine, gold salts, and/or salicylates. Many had failed to respond satisfactorily to these earlier medications and had remained partially immobilized.

Each patient in the series had localized joint signs and symptoms with clinical and x-ray evidence of organic and functional impairment.

Before treatment was undertaken, the location and extent of the disease was noted, as well as the degree of limitation of motion.

‡ Ointment B—Baume Ben Gay—furnished by Thomas Leeming & Co., Inc., New York, New York.

TABLE II

Anatomical Areas or Joints Treated

	Wrists	Hands	Elbows	Shoulders	Backs	Knees	Ankles	Legs
Rheumatoid arthritis	14	21	15	22	9	24	13	
Bursitis				12				
Lumbago				14	29			
Osteoarthritis	15	21	16	19	11	27	15	
Neuralgia				19				
Muscular aches and pains	23	27	19	41	37	14	18	11

TABLE III

Changes Noted in Articular Function after Use of Physical Therapy and Topical Applications of Preparations to Joints Tested

	Ointment B	Ointment C
Improved	189	51
Moderately improved	47	39
Unimproved	15	165
Total	251	255
% of improvement	94	35

TABLE IV

Changes Noted in Range of Motion after Topical Applications of Preparations in 211 Cases Without Adjunctive Physical Therapy

	Ointment B	Ointment C
Increased	159	39
No change	92	216
Total	251	255
% of improvement	61	15

TABLE V

Changes Noted in Skin Temperature after Topical Applications of Preparations in 211 Cases

	Ointment B	Ointment C
Increase	187	121
Decrease	0	14
No change	64	120
Total	251	255
% of improvement	74	47

Goniometric tests were made in all cases of impaired motion. The character and results of past treatment were also noted.

Salicylate Urinary Excretion

Twenty-four hour urinary excretion studies were done in all cases to serve as a measure of salicylate absorption.

Four cases using ointment C showed salicylate urinary excretion. These patients, after continued questioning, admitted taking various amounts of aspirin.

All patients on ointment B showed salicylate urinary excretion. Aliquot samples of twenty-four hour urinary excretion gave an average of 15 mg. of salicylate excreted per twenty-four hours.

The group under study, which comprised both sexes, ranged in age from 29 to 79 years. The average duration of illness in the group with rheumatoid arthritis was 5.6 years; the shortest 9 months, and the longest 14 years. In the osteoarthritis group, the average duration of symptoms was 7.3 years; the shortest 8 months, and the longest 17 years. Those with bursitis had an average duration of illness amounting to 2 months. The average neuralgia case was 3 weeks, and cases of muscular pains and sprains averaged from a few hours to several weeks.

Severity of Illness

Forty-three of the patients with rheumatoid arthritis were severely handicapped, and twenty-eight were moderately disabled. The osteoarthritis cases were of a chronic nature with joint deformity. Eight cases of severe subdeltoid bursitis were studied, in addition to one case of moderate intensity. Limitation of motion was noted in all of the arthritis cases, as well as those with bursitis.

The "blindfold" technic was employed throughout the study. Neither the examining physicians, the physical therapists, nor the patients knew the content of the preparations.

In all cases the media were applied in identical manner. Predetermined amounts constant for each joint or area were applied, following prior applications of hot towels. Generally speaking, two to five grams of the ointment were used per application.

The onset, degree and duration of relief were carefully noted. The condition of the affected areas was noted including mobility, pain and swelling, and the skin temperature was measured before and after treatment.

Changes in range of motion were determined by a standard goniometer and by knee bends and flexion. Observations were made before the ointment was applied, and after each application at ten-minute, thirty-minute and twenty-four-hour intervals. Using the same schedule of time, tests of function were made separately, varying with the anatomical area tested.

A total of 506 observations were made on 211 cases. All cases were treated with each preparation at varying intervals and the effects compared.

In evaluating the preparations, increased functional capacity, increased range of motion, decrease in swelling, lessening of pain, and change in skin temperature were considered.

Because of the possible psychological effects of special attention, questions pertaining to the effect of treatment or symptoms were entirely omitted. No patient treated with either preparation reported an exacerbation of symptoms. No harmful reactions were observed by the physicians or claimed by the patients. Side effects were restricted to redness of the skin following application of ointment B.

SUMMARY

In a controlled study, a favorable rate of improvement in range of motion of joints affected by rheumatoid arthritis and related disorders was noted when an ointment containing a compound of methyl salicylate was used in conjunction with physical therapy.

Brusch Medical Center
Cambridge, Massachusetts
(*Dr. Brusch, Dr. Grasse, Dr. Papas and Dr. Lamphier*)

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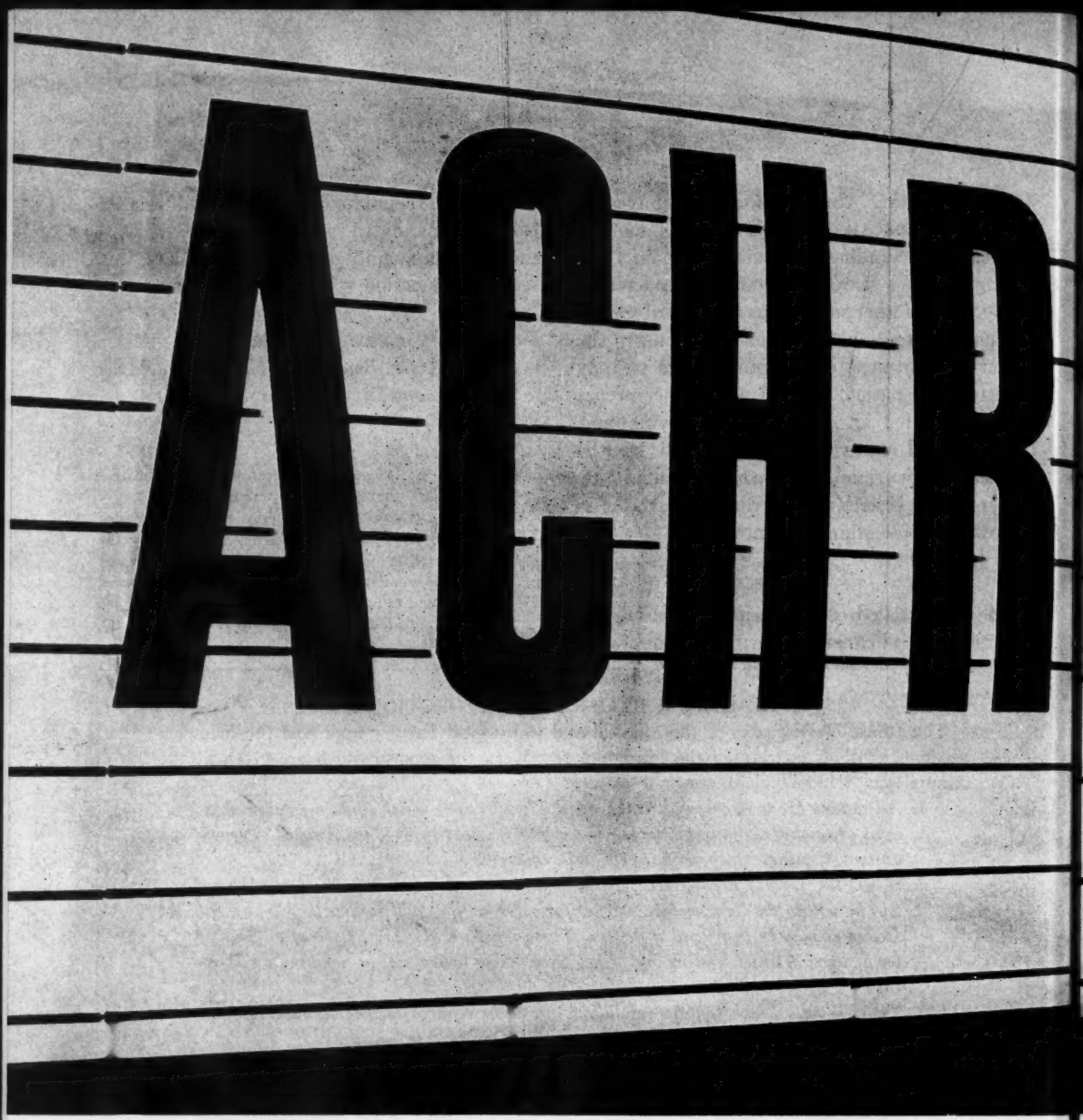
REMINDER REGARDING RESOLUTIONS!

The House of Delegates of the Medical and Chirurgical Faculty approved the following recommendations concerning the procedure to govern the reports which are given at the Annual and Semiannual Meetings:

1. *All reports are to be received in the office. Those reports which contain recommendations or resolutions must be in the office eight (8) weeks prior to the Annual or Semiannual Meeting, whichever happens to be concerned.*
2. *When the reports are received, those containing recommendations or resolutions will be sent to the Component Societies for consideration and so that the Component Delegates may be instructed if desired. These reports will also be referred to Council for discussion at its meeting one or two weeks prior to Annual or Semiannual Meeting.*
3. *Those reports which contain resolutions are to be referred to the Resolutions Committee for consideration.*
4. *The Council will refer to the Resolutions Committee any recommendations which it feels should be formulated as resolutions. The Council will also transmit to the Resolutions Committee an opinion of the policy involved in the Resolutions Committee.*
5. *Reports will be presented to the House of Delegates as usual, and it will be suggested as usual that those reports not containing recommendations or resolutions be accepted as printed and distributed.*
6. *Those reports containing recommendations or resolutions will be considered and acted upon individually by the House of Delegates.*
   This policy will be followed in all future meetings.

AS A RESULT OF THIS ACTION OF THE HOUSE OF DELEGATES, RESOLUTIONS FOR PRESENTATION TO THE MAY 1956 MEETING OF THE HOUSE OF DELEGATES, MUST BE IN THE HANDS OF THE SECRETARY, DR. EVERETT S. DIGGS, AT THE FACULTY OFFICE, BY MARCH 7, 1956.



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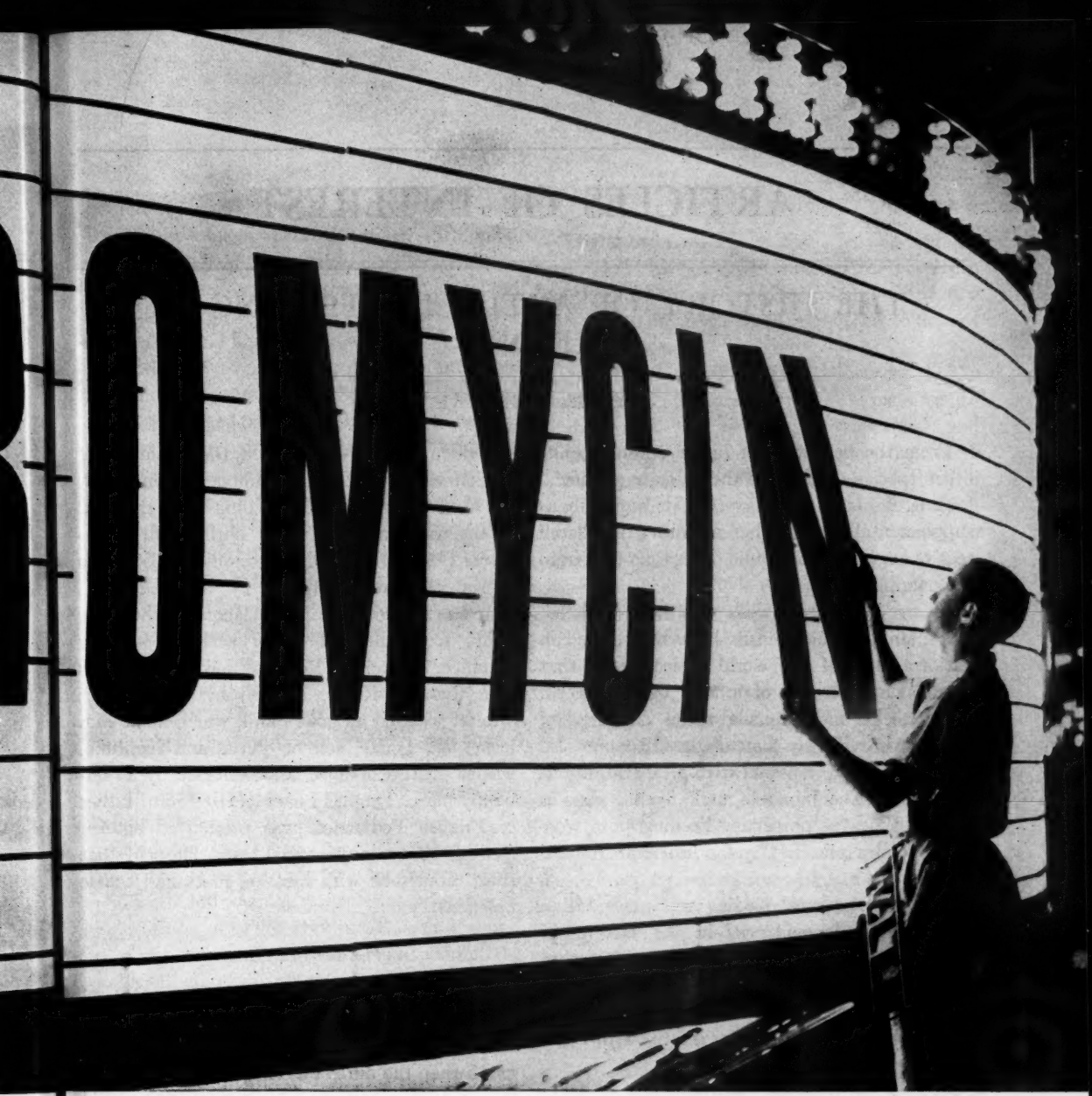

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ARTICLES OF INTEREST

THE HISTORY OF ARTIFICIAL FEEDING OF INFANTS[1, 2]

FELISA J. BRACKEN[3]

From the beginning of history, humans like other species, breast-fed their young. Artificial feeding of infants may have had its beginning as supplemental feeding when a mother first dared to give her infant some fluid other than that from her own breast.

It is not known of what this fluid consisted, but infant feeding utensils have been found in various parts of the world which prove that supplemental feeding of infants was practiced. The Greeks and Romans made clay feeding vessels and evidently some of glass. Romans also used a boat shaped vessel with a tapering spout at one end. The Japanese made feeding cups in ancient times of porcelain. Feeding pots were found among relics left by the American Indians (91, 93).

That supplemental feeding was practiced in ancient times is evidenced in the writings of Hippocrates (460–370 B.C.), who stated that infants who took other foods during suckling bore weaning the more easily (91). He prescribed, as a beverage for infants, wine diluted with water not quite cold (84).

Soranus of Ephesus, second century A.D., recommended slightly boiled honey cooled to lukewarm and dribbled into the mouth of an infant 1 or 2 days old. After two days of feeding in this manner the infant was given the breast of a good wet nurse. Soranus did not believe mother's milk fit for the child for the first 20 days (84).

[1] Submitted to the Lydia J. Roberts Essay Award Contest of the American Dietetic Association, 1954.

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[3] Department of Public Welfare, Baltimore, Maryland.

Evidently from this time on, the employing of wet nurses became quite common. This increased the need for supplemental feedings—for the child of the wet nurse, if not for both infants. Avicenna (980 A.D.), gave advice on how to choose a proper wet nurse (91).

It was thought that infants acquired character traits from the milk they sucked (34), for instance, the story of Romulus and Remus, twins who founded Rome, suckled by a she wolf; Jupiter was fed on goat's milk which made him lecherous; Pelias, son of Tyrus and Neptune, was so brutish because he was nursed by an unhappy mare. Thomas Phaer (1510–1560), father of English Pediatrics, was prejudiced against feeding infants any animal milk. He said that sheep nourished with milk of goats had coarse hair (84).

SUPPLEMENTAL FEEDINGS

Supplemental feedings were frequently of foods other than milk. Bartholomaeus Metlinger, a German writer of the 15th century, advised gruel when the nurse was sick or had little milk. When children cut their front teeth they could have bread soaked in milk, meat soup or pea soup. He quoted Avicenna's recipe for an electuary of milk, water, white bread and sugar. One might feed infants a small quantity of lean, well cooked meat cut very fine when they had cut a few teeth. If a child had to be weaned under a year Metlinger advised boiled goat's milk (84).

It was customary to give food along with milk before the end of the first month according to Scevole De St. Marthe's pediatric poem printed in Latin in 1584. Bread, flour or meal was

diluted with water or milk and boiled to make pap. Bread was broken in broth, mixed with milk, sometimes with butter and boiled (90). Supplemental feedings of farinaceous foods, pap and panada, of thick gelatinous consistency, were used for several hundred years.

In addition to pap and panada, infants were fed solid foods. Avicenna advised the nurse, before giving bread or other solid food to an infant, to chew it thoroughly in her own mouth and then eject it or put it with her fingers into the infant's mouth. A French physician, Simon deVallambert seems to have been the first to condemn this practice in about 1565 (91). Rev. Israel Loring mentions it in 1750 in Colonial America (16). William P. Dewees, wrote in 1825 "We cannot declaim too loudly against the filthy, and oftentimes injurious practice, of nurses, making every particle of the child's victuals pass through their own mouths" (25). As late as 1902 pediatricians condemned the practice of mothers and nurses moistening the nipple or putting it into the mouth to test the temperature of milk before feeding it to an infant (58).

In ancient times a mother suckled her infant 2 or 3 years (34, 93). The time for the feeding of solid foods and weaning was later associated with the eruption of teeth. Hippocrates was the first to study the question of whether or not the evolution of teeth had any real effect on the infant's health (14). In 1692, John Peachey advised weaning when children had all their teeth. This was considered a golden rule for many years (34). In the 18th and 19th centuries physicians attributed many serious symptoms to the cutting of teeth (25, 32, 42, 95). In the 19th century Eustace Smith warned that it was not always safe to wait until a child had all its teeth before weaning or giving it additional food, as he claimed rickets was a disease of malnutrition and might postpone indefinitely the evolution of teeth (86). The question was still unsettled but Pierre Budin observed, at the end of the 19th century, that many infants cut their teeth without any sign of general disturbance (14).

Dry Nursing

Dry nursing, spoon or hand feeding was attempted with greater frequency in the 18th century. A number of writers mentioned it as a method to be tried when a mother could not nurse her infant.

Joseph Raulin (1708–1784), wrote of the nourishment of infants without recourse to human milk. In Germany, Switzerland and France children were nourished from their birth with pap composed of cow's or sheep's milk and barley flour. Children were fed this every 4 hours with intermediate feedings of water, in which raspings of a deer horn, or ivory and anise seeds had been boiled. When this did not agree with children they were given meat juice, the yolk of egg and bread or toast reduced to a powder and mixed with milk or meat juice. In Basel, Switzerland, foundlings who were fed pap made of milk and flour and with only water to drink did not die any more frequently than those brought up differently nor were their diseases any more dangerous, according to Raulin (83).

Von Helmont said milk was harmful and suggested feeding infants from time of birth on pap made from beer and sweetened with honey. Raulin said this was the same as using water, for the volatile part of beer was dissipated by boiling; and wondered how many children Von Helmont had raised in this manner (83).

18th Century

Famous pediatricians of the 18th century in Europe and America, Walter Harris (2), William Cadogan (15), George Armstrong (5), Hugh Smith (88), M. Brouzet (13) and Alexander Hamilton (42) (the physician) still tolerated the use of farinaceous food but they urged the use of animal milk in hand feeding (27). Pediatric practices in the American Colonies were influenced by European physicians (16). Cow's milk was most readily available but literature of the 18th century mentions feeding infants the milk of goats, asses and mares. Armstrong said,

infants bred up by hand from birth should have new cow's milk alone to drink as well as having it mixed with victuals (5). From this time on dry nursing was better than poor wet nursing (17).

Wet nursing was beginning to fall into disrepute in the 18th century (29). Unscrupulous women took several infants to nurse, gave them little or no breast milk, and fed them mostly pap and panada. Young women had illegitimate children in order to get fairly easy employment as wet nurses (17).

Harris said he had sometimes seen children in a languishing way, from no other cause than their nurses feeding them too thin and slender a diet (2). Hugh Smith observed that a child was overfed when it threw up curdled milk. Milk always curdled in the stomach, "it is a vulgar error to suppose the contrary." He warned that dry nursing was for well children. When a child was ill a physician should be consulted (88).

There are numerous statements that physicians of the 18th century did not like to treat children for they could find out nothing about their diseases. A physician seldom had a chance to see a child until it was dying. The ordinary physician's fee was prohibitive. The poor were unable to carry out physician's directions even when well advised (17).

It may be surmised that a mother frequently offered a free diet and relied more on trial and error than on medical advice, as did the Colonial mother who wrote proudly of her son at 8 months tied in his chair eating fat pork and Indian cake for his dinner (16).

However, an interest in the welfare of infants was growing. Working women could not nurse their babies and work. Foundling hospitals were established in England and France to care for abandoned infants of the poor before the middle of the 18th century (17). Such institutions had been established much earlier in Mediterranean Countries (73).

In reference to sending infants from the foundling hospital to the country to be nursed, Cadogan says, it is not likely that the wet nurses will have milk enough for two. He suggests they give the infants a little bread and butter and any kind of mellow fruit, either raw, stewed or baked, roots of all sorts and all the produce from the kitchen garden. As soon as children have teeth, at 6 or 8 months, they may be given a little "flesh-meat." They should never have sweets or pastry wares (15).

Infant Mortality, 18th Century

Infant mortality in the 18th century was very high. Walter Harris, in 1742, said "the passing bell hardly ever ceases ringing out the death of infants." Although artificial feeding meant possible death, women of means held maternal nursing lightly—so great was their desire to participate in social life (2, 17).

Cadogan wrote in 1748 "Dry nursing I look upon to be the most unnatural and dangerous Method of all: and, according to my observation not one in three survives it. To breed a child in this artificial Manner requires more Knowledge of Nature, and the animal economy, than the best Nurse was ever mistress of as well as more Care and Attention than is generally bestowed on Children: the skill of a good physician would be necessary to manage it rightfully" (15).

Nathaniel Ames wrote in his Almanac, for sale in the American Colonies in 1762, "Many infants are sick, and many die with unsuitable aliment they receive by Hand" (16). Harris attributed the causes of diseases of children, other than inherited, to cold, to thick milk, to allowing them too early to eat flesh and to being given wine and other spiritous liquors (2).

Pediatricians of the 18th century complained of the thickness and quantity of pap and panada fed to infants, differed about the ingredients: whether to use bread crumb, biscuit, roll or flour, water, beer or broth, but by the end of the 18th century it was generally agreed that hand fed infants must have milk (5, 13, 27, 42, 83, 88, 91). In the 19th century pediatricians seldom advised feeding infants under one year any food other than milk or farinaceous food mixed with

milk or broth. Mashed potato at nine months was an innovation (25).

Direct Sucking from Animals

Direct sucking from animals was an interesting phase of artificial feeding that may have grown out of the observation that the milk fed to infants should be as fresh as possible. In 1775 the foundlings in the hospital at Aix were all dying at the age of 4½ months until Alphonse Le Roy ordered direct sucking from goats, "Since that time the cribs are arranged in a large room in 2 ranks. Each goat which comes to feed enters bleating and goes to hunt the infant which has been given to it, pushes back the covering with its horns and straddles the crib to give suck to the infant. Since that time they have raised very large numbers in the hospital" (27). In a Paris Hospital foundlings sucked milk directly from asses (9). Some 19th century writers believed that milk, an animal juice, contained some fine, subtle, volatile particles, which evaporated upon its being long out of the body (82, 96). Michael Underwood, Eustace Smith and C. H. F. Routh in England approved direct sucking from animals (82, 86, 96).

19th Century

William Heberden, 1805, advised feeding infants the milk of asses or dilute cow's milk for the first month, later adding soaked bread, boiled barley, oatmeal or rice to the milk. He sometimes gave these foods in broth (44).

Eustace Smith, 1869 commented that asses' milk nearly approximated woman's milk in composition (86). J. Lewis Smith, in his text published in Philadelphia in 1869, suggested goat's milk for poor families who could not keep a cow. Fresh goat's milk was better than cow's milk brought from the country (89).

Michael Underwood wondered how the custom of stuffing infants with bread could have become so universal. He said one sometimes saw fine children brought up by hand from birth who had been fed thick victuals but only the strong could survive this. Underwood wrote of families accustomed to bringing up children by hand, who nourished them well on French or Uxbridge roll boiled in water to a jelly and afterwards diluted with milk. The food was changed from time to time. Different kinds of bread or other farinaceous substances were mixed with milk, and broth was sometimes substituted for the milk for a few days when the bowels were loose (96).

Henry Pye Chavasse, in 1871, still advocated the use of pap. He said artificially fed infants must have cow's milk, and favored the use of proprietary foods (20).

James Frederick Goodhart and others of his time tied white flour in a pudding cloth and boiled it 10 hours to convert it into dextrin or grape sugar. The outer soft part was cut away, the inner hard part grated. One teaspoon at a time was mixed with cold milk to which a quarter of a pint of hot milk was added before serving (40).

Infant Mortality, 19th Century

In the early 19th century Marshall Hall said 7 in 10 dry nursed infants died (38). In the editorial notes of Underwood's "Treatise on the Diseases of Children," Dr. S. Merriman said if parents were fully aware of the hazard to which their children were exposed, they would rarely choose to place them under the care of the dry nurse (95). Routh was hopeful in 1860, stating, "The subject of bringing children up by hand . . . more judiciously, is beginning to occupy the particular attention of the public and the profession. Let us hope we are on the eve of better things" (82).

Routh published tables and statistics on deaths in Foundling Hospitals in London and Ireland and called dry nursing a murderous system (82). In the years 1866–1869 five children's hospitals were founded in London. Their large out-patient departments provided opportunities for making a practical study of artificial feeding (34).

In the United States in 1869, J. Lewis Smith

said artificial feeding generally ended in death. The children did thrive in cool weather but were the first affected by diarrhea in warm weather. More than half of the children in New York who were spoon fed at the beginning of the summer died before the return of cool weather. In the country where fresh milk was easily obtained the results of artificial feeding appeared to be nearly as favorable as wet nursing (89).

Growth of Artificial Feeding

The progress of artificial feeding in the 19th century can be traced through the different editions of Dr. Eustace Smith's book on the wasting diseases of children. He referred to hand feeding in 1868 as requiring the greatest of care (86); however, by 1878 it was denounced by some and praised by others (87).

In 1897 Holt said 90% of the infants seen in private practice could, with care, be reared by artificial feeding. If the child was healthy, lived in the country and the weather cool he advised trying artificial feeding before wet nursing. Wet nurses were expensive and there was the moral issue of what happened to the child of the wet nurse (47). Goodhart, 1889, mentions wet nursing as a last resort (40).

In regard to diarrhea and symptoms indicating derangement of the digestive function Eustace Smith cautioned his readers to be sure that it was not the preparation of the food, the way fed, or lack of cleanliness of the feeding apparatus that was at fault (86). Earlier writers had sometimes mentioned the necessity of rinsing feeding equipment or washing it.

Feeding Equipment

Artificial feeding was long handicapped by the lack of efficient feeding equipment. Writers of the 18th century believed an infant should labor for food as it would at the breast. A scraped, polished cow horn with perforated tip was popular for many years, probably because it was available and inexpensive (2, 5, 9, 88). Parchment, chamois, cloth and tanned heifer's teats were used as nipples. The parchment and chamois were loosely sewed together so that milk could be sucked through the stitches. The heifer's teat had to be preserved in wine or spirits when not in use (32). A sponge was sometimes inserted so the nipple would not collapse (5, 34, 77, 88).

Hugh Smith invented a feeding pot like a small coffee urn. The neck arose from the very bottom of the pot on the principle of the gravy-pots of his time which separated gravy from the oily fat (88, 91). Underwood said food in the feeding pot was easily kept warm in the bed or by use of a lamp. Underwood directed that the pot be scalded once a day with particular attention to the rinsing of the spout (96). Heberden mentioned a glass bottle shaped like a horn (44).

There were few improvements in feeding equipment until the middle of the 19th century. Two or three specialized bottles were invented. Cooper's was pear shaped. A woman could wear it held in position by a band. This kept the milk warm (82). The bottle had a large breast shaped India-rubber nipple with a stop cock at the inner end which dropped to the bottom of the bottle, to regulate the flow of milk. The inventor called this contrivance "mamma" (34). Maw's feeding bottle was closed by a metallic cap, from which a straight glass tube passed to the bottom of the vessel. This was connected in the cap with a second tube of "caoutchouc," to which the mouthpiece was attached. Eustace Smith cautioned that sour milk would collect in the cap which must be thoroughly cleaned. Bottles with cork caps should be avoided because it was impossible to get the sour milk out of the cork. A piece of linen wrapped around the metal cap would insure perfect fitting. The linen must be discarded after each feeding (86).

A "Biberon" was constructed to permit the person feeding the infant to regulate the flow of milk by means of a tube, valves and suction pump (94). The old fashioned Alexandra elaborated the internal tube of "mamma" and prolonged the nipple as a flexible tube (34, 50).

When at last the necessity for cleanliness was

understood tubes were done away with (35, 39). Attempts were made to improve the cow's teat nipple. Decalcified bone teats, wooden teats, metal teats, thin elastic cork and India-rubber teats were offered for sale (26, 61, 77). The latter were not popular at first because of their repulsive taste and odor (34, 82). By the end of the 19th century nipples were simple, straight, black rubber ones hollow but elastic to retain their shape (34, 46). The bottle reverted to a shape more like the traditional cow horn (4, 34).

Fleetwood Churchill, 1850, mentioned that some infants would partly suck, partly drink from a small cup. With this method there was no risk from lack of cleanliness of bottles and nipples. One had to be careful not to pour the food too rapidly (22). Chavasse ruled out all other methods of feeding in favor of the nursing bottle (20).

Size of Feedings

The amount of food to give an infant had long puzzled people who cared for children. Hugh Smith said a Winchester pint of cow's milk was the proper quantity for a newborn infant in the first 24 hours. Nurses, he said, would sometimes feed 2 quarts of pap, which had far less nourishment. Smith gave a quarter of a pint at each meal and increased the amount as the child grew older (88). Churchill and Dewees fed a teacup full every 2, 3 or 4 hours (22, 25). Single feedings were prepared at a time. Milk was mixed with other ingredients in the feeding horn or bottle (27, 96).

Dr. Goodhart inserted a table in the 4th edition of his "Diseases of Children," in 1889, which briefly summarized hand feeding. For the first time full directions were available on size of feeding, quantity per day, and hourly intervals of feedings based on age (34, 40).

Early Formula Equipment

As infant feeding became more scientific, equipment for preparing the formula became more complicated. A picture of a sterilizing apparatus to use on a kitchen range appears in Goodhart's text of 1889. Milk was heated to 210 degrees F. under pressure for one hour or more (40).

Equipment for the home modification of milk in the early 20th century included metal sterilizers to hold a day's supply of glass bottles, glass graduates, siphons, funnels and even a "cozy" for retaining heat in the sterilizer (58, 80). By this time milk was being delivered to the home in bottles, and feeding bottles and nipples were being boiled. Attention was paid to the cleanliness of the person mixing the formula and the m xed formula was being refrigerated until warmed for use (58).

Proprietary Foods

In 1883 there were no less than 27 brands of proprietary or patent baby foods available, most of which enjoyed a short life, although they were widely used before the percentage system of formula calculation was born (75).

Numerous articles were tried in an attempt to prepare easily digested infant food: "Hard's Farinaceous Food," tops and bottoms, various biscuit powders, sago, arrowroot, salep, gum arabic, groats (prepared barley), manna croup (coarse grains of ground wheat), and Liebig's Food for Infants," the latter a liquid consisting of milk, wheat flour, malt (to convert starch to grape sugar) and a small amount of bicarbonate of potash (20, 22, 34, 40, 86).

Edmund Cautley, 1910, classified proprietary foods into two groups: those prepared from cow's milk and modified cereals with starch unchanged or partially converted to dextrin: example Horlick's Malted Milk, and those prepared from cereals only: example Mellin's Food (18).

Boiling of Milk

Although early pediatricians recommended the boiling of milk because they observed raw milk was more laxative (84), there was a prejudice against boiling milk in the 19th century (20, 21,

25, 34, 86, 88). This retarded the progress of infant feeding (34). Holt said in the cities during the summer milk must be boiled (46). Jacobi wrote at the end of the 19th century: "There has been only one great progress made in infant feeding these dozen years—namely the more or less universal introduction of the practice of heating cow's milk and all other substances employed in infant feeding" (56). After the development of bacteriology, milk was boiled to kill bacteria. In the 20th century Joseph Brennemann showed that boiled milk was better tolerated by infants than clean raw milk (10, 11, 12, 14, 65, 75).

Pathological Studies

Pathological studies did not clarify the problem of infant feeding and nutrition. The French physician, Charles Michel Billard (1800–1832), performed many autopsies on infants and attempted to classify disease according to anatomical lesions. In the 18th and 19th century pediatricians often thought the symptoms of vomiting and diarrhea were the result of an inflammatory condition of the digestive tract (75, 86).

Growth of Scientific Methods

In the latter part of the 18th century inaccurate but thought provoking chemical analyses of milk were first made (75, 96). By the 19th century physicians were advocating a formula of ⅔ milk and ⅓ water with a moderate quantity of loaf sugar (16, 22, 25, 32). Later in the century they diluted cow's milk with equal quantities of lime water or barley water, and added cream or top milk and sugar (46, 86, 89). Pediatricians attempted to dilute and modify cow's milk to make it more like human milk and better suit it to infant digestion (40, 58, 77). This was known as the percentage system of formula calculation.

Thomas Morgan Rotch did much to place the intricate subject of infant feeding on a scientific basis (98). He urged that "the endeavor be made to rescue this important branch of pediatrics from the pretensions of proprietary foods and the hands of ignorant Nurses" (81). Chemical studies of the times had far reaching effects and led some to believe there was harmfulness in the various constituents of cow's milk. Early writers had urged the use of milk from one cow. Now pediatricians advocated mixed milk of the herd in order to dilute the harmfulness that might be present in the milk of a single cow (58).

Numerous milk mixtures were produced: albumose milk, humanized milk, cream conserves, malt soup, veal broth (made with cow's milk, veal broth and cream), top milk and cream mixtures, whey mixtures, peptonized milk and laboratory milk (22, 27, 33, 40, 58, 77, 80, 81, 88, 96). Buttermilk, dried milk (Dryco) and condensed milk were also used (18, 21, 58). Some dilutions so decreased the food value that many infants were underfed (65). Adolph Baginsky, 1897, said all conserves were inferior to fresh cow's milk and their use was apt to cause severe anemia and scurvy (58).

Cream and Top Milk Mixtures

John Clarke in 1815 was one of the first to advocate the use of cream diluted with starchy decoctions (58). John Forsyth Meigs in 1853 had very satisfactory results with a mixture of milk, cream, gelatin and arrowroot water. In the 70's he added lime water (68). Later his son, Arthur V. Meigs, studied the protein in human and cow's milk and established the protein in human milk at 1% (66).

Meigs' mixture was made from a quart of good fresh milk which stood in a high pitcher 3 hours so that the cream could rise. It consisted of 3 tablespoons of the top half of the milk, 3 tablespoons of milk-sugar water and 2 tablespoons of lime water mixed in a feeding bottle and warmed. A 2 day old infant was given ½ ounce at each feeding 7 or 8 times a day. As the child grew older the amount per feeding was increased and the number of daily feedings decreased. An older child received a larger amount of the formula which remained the same strength. Meigs did

not advocate sterilization but thought it better to see that the milk was free from contamination (58, 67).

Goodhart recommended the use of strippings (milk taken from the cow after the regular milking) because this milk is rich in cream and poor in curd (40). Henoch, Bierdert and Gerhardt diluted milk with 3 or 4 parts water. The Heubner-Hoffman Mixture (58), another of this era, was sterilized in the Soxhlet apparatus (77). Modified milk dilutions and additions of substances met with little success until methods were adopted to insure absence of harmful bacteria (58).

Laboratory Milk

Rotch was instrumental in establishing milk laboratories to modify milk for individual children. What one thrived on another did not. He believed in artificial feeding and said that many infants would not thrive on the food which nature provided for them (80). In the milk laboratory modifications were carried out under the physician's order,—ignorance and carelessness were eliminated, extreme cleanliness was observed. Unfortunately laboratory milk was too expensive for the masses (19, 81).

A. Jacobi asked if iron clad rules as to the composition of a substitute were to the point. He asserted that human milk varied a great deal in composition. He preferred cane sugar to lactose, reduced rather than increased the fat of cow's milk, diluted milk with water and added a small amount of salt (56). Some European workers used und luted cow's milk with success (14, 58). Baginsky maintained that when dirt and bacteria in cow's milk was diminished, the results were so satisfactory that in the case of feeding healthy infants elaborate methods of altering the composition of cow's milk were of little value or even superfluous (58).

Condensed Milk

Sweetened condensed milk was produced in Europe at the same time proprietary foods were in vogue and was classed with them (18). Gail Borden patented condensed milk in the United States in 1856. Various methods of concentration were tried. Early samples were not sterile and the composition varied (8).

Children seemed to thrive on sweetened condensed milk but often developed nutritional disorders, and succumbed to infections easily (40, 46, 58, 75). Goodhart and Holt thought it useful in emergencies but advocated that a child should be put on good cow's milk as soon as possible (40, 46). Conversely, in the 1930's Dr. Harold E. Harrison fed sweetened condensed milk with cod liver oil and orange juice. The infants' physical development was satisfactory (43). The ill effects of feeding condensed milk may have been due to excessive dilution and lack of supplementary vitamins (75).

Alois Monti mentioned two kinds of condensed milk produced in Europe and reported no good results from the use of the one evaporated without sugar (58). A new preparation of sterilized evaporated milk, cheaper and more available than the imported article, was shown at the meeting of the American Pediatric Society in 1893. Dr. Rotch hoped the Society would put itself on record against the use of evaporated condensed milk (19). This milk was first produced by John Meyenberg in Highland, Illinois, in 1885 (8). Pediatricians used it in the treatment of diarrhea and difficult feeding cases with good results but it was not widely used until about 1920 (12, 18, 48, 60, 77).

Holt in his text of 1906 tells of fresh condensed milk without sugar being delivered daily in New York. "For the poor in cities it is sometimes the best infant food available." Holt diluted it with 8 to 12 parts water, added sugar and cream if available, otherwise cod liver oil, 5 to 20 drops at a feeding (48). In his text of 1916 Holt speaks of evaporated milk being delivered fresh daily, also sold in tins; one part represented 2½ parts of the original milk and required the same modification as cow's milk. He said children thrived on it who could not digest raw milk of the same percentage composition, but added that

it should not be continued as the sole food when good fresh milk could be obtained (49).

Bacteriological Studies

Bacteriological studies contributed much to the science of artificial feeding. Theodor Escherich showed the relationship of colon bacillus to disease in 1886 (75). Pierre Budin, who established "Consultations for Nurslings" in France and thereby considerably lowered the infant death rate, wrote of protecting infants from the scourge of diarrhea (14). Duval and Bassett, working in the Thomas Wilson Sanitarium in Baltimore in 1902 demonstrated that bloody diarrhea in infants was really caused by an organism identical with the dysenteric bacillus isolated from cases of acute dysentery in adults (31).

Budin affirmed that through the sterilization of milk, considerable reduction in the appalling infant mortality was not only possible but practical. He gave interesting case histories of infants fed on pap or chicken broth, and ill with diarrhea, who responded to feeding with undiluted sterilized cow's milk. William J. Maloney, translator of Budin's work in 1907, mentioned 14,306 infant deaths from diarrhea in July, August and September of the preceding year in 76 great towns of England and Wales. The objection to sterilized milk persisted for it was thought to cause scurvy (14). The amount of heat necessary to destroy bacteria present in milk was the subject of considerable debate (37, 58). Much of the milk available was badly contaminated (65).

Attempts were made to preserve milk without heat. It was treated electrically, chemical preservatives and carbon dioxide were added. These methods did not prove satisfactory. Pediatricians disapproved of introducing any foreign element into milk which was given to infants (19).

Unsanitary Sources of Milk

In the 18th century custom allowed retailers to skim and water milk to a degree that made it quite profitable. (The water supply was bad) (21, 99). It was no wonder that spoon or artificial feeding was attended by prohibitive mortality (2). In the 19th century in England dairymen stalled diseased cattle in crowded underground cellars (62). Rapid means of conveying milk were lacking and it frequently turned to butter or buttermilk in transit (82). In New York City cows were kept under foul conditions, fed "distillery slop" and milked by tramps for the privilege of sleeping in the cow sheds (45).

Milk delivered in large cities was from 24 to 48 hours old, and considerable residue could be separated out by use of the centrifugal machine (19, 58). There was great temptation to use preservatives. Delivery men ladled milk from large cans on the route but the use of bottled milk was becoming popular. Expediently, if the demand on the route was greater than anticipated, deliverymen might fill some bottles returned by housewives with no further cleaning. Vegetable coloring and cream thickener were used. Rowland Godfrey Freeman, who classified milk borne diseases in 1896, said regulations would do much to reduce the amount of sickness conveyed by germs in milk (36). When an infant in a large city was artificially fed the acquiring of some gastric disorder was almost inevitable (56)!

Improvement of Milk Supply

Investigation of herds and elimination of animals whose milk contained certain amounts of pus cells was recommended. Improved methods for care and feeding of cows were suggested. Udders of cows were cleansed before milking. It was believed that if pure milk could be obtained it would keep well with one pasteurization (19, 36, 92).

The Walker-Gordon Laboratory opened in Boston in 1891 excited competition among milk dealers and increased the supply of milk suitable for infant feeding (47, 58, 81). Extreme cleanliness was observed and equipment was sterilized with live steam (81). In the Trinity Diet Kitchen

of Chicago milk was kept for almost 2 weeks without souring, even though it was never sterilized or pasteurized (72).

Pioneer attempts to standardize the milk supply were made by Henry L. Coit, of Newark, New Jersey, the founder of the Medical Milk Commission and originator of "certified milk" (59). J. H. Huddleston advocated selling milk and cream of known guaranteed fat percentages. Pasteurization could be practised at small cost to the dairy (51). Milk inspections in 1900 included the dairy, the wholesaler and the retailer. Samples of milk were collected and tested by a chemist; a veterinary inspector visited the dairy. Milk was furnished in sealed bottles. In 1902 milk commissions existed in New York, Philadelphia, Baltimore, Boston and Buffalo (7, 58).

Laws passed in England and France directed against the evils of farming out infants required registration of infants and licensing of nurses, and brought about a gradual lowering of the death rate (14, 45). Advances in medicine, hygiene and sanitation caused a fairly uniform decline in general mortality after 1870. There was no general fall in infant mortality until 1900 (45).

Feeding of Prematures

The loss of premature infants seemed to Rotch a needless sacrifice of life. Besides inventing a new incubator (79) he tried to exactly modify milk to adapt it to the digestive powers of premature infants (80). Budin used breast milk when available, artificial feeding when necessary. With calf's pancreas he predigested milk which he called peptonized (14). Pediatricians used condensed milk, mixtures of egg albumin in water with cream and sugar, raw meat juice and sterilized whey. Feedings consisted of from 1 to 4 drams fed every hour by means of small nipples, medicine droppers or pipettes. Gavage was used as a last resort (1, 6, 58, 97).

Infant Welfare Movement

Budin attacked the problem of artificial feeding by working with the mothers. "Many mothers, though ignorant and poor, are eager to fullfill their obligations to their children.... Is it not our duty to supervise, direct and help them to the best of our ability?" (14). Budin's Consultations for Nurslings and other baby milk stations established at the end of the 19th century were really schools for mothers. Records of infants' weight gains were kept as an indication of whether or not infants were thriving. Mothers appreciated medical advice on how to raise their children. Sterilized milk was distributed in bottles holding enough for one feeding. The cost of Budin's dispensary was small. He utilized all available breast milk, supplemented with undiluted sterilized cow's milk for very young infants. Thus he did away with manipulation of milk which provided opportunities for impurities to enter. Children were seen for 2 years. Maloney urged every physician to adopt Budin's methods (14).

Milk dispensaries established in France at the end of the 19th century offered services free to the poor, accepted partial payment from artisans, and full payment from middle and upper classes. A mother in need could appeal to the Board of Public Assistance. The cost of sterilized milk was deducted from the grants; only mothers who nursed their infants received the full grant (14).

In the 20th century international conferences on Infant Mortality were held in Europe. The American Association for the Study and Prevention of Infant Mortality, founded in 1910 (54), investigated the problem (23). The Children's Bureau was established as part of the U. S. Federal Government in 1912 under the direction of Miss Julia Lathrop (38). Infant Welfare became the concern of nations.

20th Century Trends

Pediatricians of the 20th century recognized the need of a physiological basis for feeding since infants of the same age varied in weight

(34). Although Otto Heubner had built the first respiration calorimeter for infants in 1894, practical use of calculations of energy value of milk did not get under way until well after the turn of the century (74, 75, 76).

In the first two decades of the 20th century the feeding of sieved green vegetables at 5 months or earlier was begun and well cooked cereals were added to the diet at 7 or 8 months (41). Lactic acid and lemon juice formulas were popular (63, 71). There was some publicity given the use of mixtures of browned flour, heated butter, water and sugar to make a stock to add to milk in correcting indigestion apparently caused by fat of cow's milk. The butter was heated to drive off volatile acids (41). Pediatricians adopted these butter-flour mixtures from the experience of Alpine peasants (74).

With the discovery of vitamins the belief in the harmfulness of certain substances gave way to concern about too little of some substances. The enteral infections of pre "clean milk" days became less common, but infections elsewhere than in the intestinal tract (parenteral infections) have received increasing emphasis as causes of nutritional disorders (75).

Vitamins in Artificial Feeding

In the later 19th century an antiscorbutic element was recognized as present in fresh milk and absent from farinaceous foods, condensed milk and heated milk (21). In 1896 Jacobi wrote, "Valuable additions to pediatrics have been made within a short time." First among these findings was the fact that infantile scurvy could be treated with orange juice (56). Routh, 1860, "cod-liver oil in teaspoon doses is almost always beneficial in cases of defective assimilation" (82). Eustace Smith said cod liver oil was more a food than a tonic (86). Jacobi, in 1874, did not know the cause of rickets but said pediatricians formerly thought it occurred among children of the wealthy, luxurious classes, and placed the blame on artificial feeding. He found it even more prevalent among breast fed infants of the poor (53). In 1896 Jacobi mentioned several methods of treating rickets among which were "cod liver oil, when given pure, is a powerful addition to the antirachitical diet. It is safer to avoid the compounds, emulsions, etc. and rely on what is knowable" (56). Rachitical children fed on bitch's milk are reported to have recovered in an incredible time (55).

Lunin had shown, in 1880, that synthetic milk was not adequate for normal nutrition. Eijkman in 1897, first produced experimentally a disease due to a vitamin deficiency—beriberi in pigeons. Many vitamin studies followed. It was recognized that disease might result from too little of an essential substance (75). By the second decade of the 20th century orange juice and cod liver oil were regularly given infants to prevent scurvy and rickets in addition to the formula (41). In 1922 E. V. McCollum recognized many individual substances essential for a complete diet (70).

Evaporated Milk

Evaporated milk began to be widely used in infant feeding in the 1920's. It was now uniform in composition and sterile (64). Formula was easily prepared and there was small chance of error or contamination. Sugar was measured and dissolved in the required amount of boiling water, for example 2 oz. of sugar in 20 oz. boiling water, followed by the proper amount of evaporated milk stirred in, say 10 oz. This formula, poured into a day's supply of sterilized feeding bottles was then ready to use (65). Evaporated milk was successfully used in feeding premature infants. Investigators proved it was more readily digested than raw or pasteurized cow's milk (24, 65, 85).

Manufacturers began to fortify evaporated milk with vitamin D in an attempt to prevent rickets (30). They formed the Irradiated Evaporated Milk Institute in 1934 (78). Various amounts were tried but Jeans and Stearns found that milk containing enough concentrate to allow 400 U.S.P. units of vitamin D to a re-

constituted quart was the most effective amount to prevent rickets and permit excellent growth and development (57).

In 1943, in spite of the educational programs conducted at the children's dispensaries and well baby clinics of Baltimore, stressing the necessity of supplementary vitamins, autopsies on infants dying in the Harriet Lane Home of the Johns Hopkins Hospital revealed a surprisingly high incidence of both scurvy and rickets. If the infants of this segment of the population who were not reached by educational programs were to be protected, a basic food with essential vitamins added seemed necessary. Such a basic food might also be useful in feeding large numbers of undernourished infants in war torn countries of Europe. For these reasons E. V. McCollum and Wilson Grubb produced a completely supplemented evaporated milk containing both anti-rachitic and anti-scorbutic vitamins. It proved suitable as a complete food for infants for at least the first 9 months of life, supporting normal growth and development, while preventing vitamin deficiency. The food was well adapted to transportation, storage and distribution. It was marketed at a price above that of evaporated milk containing vitamin D, although less than the price of such milk plus a source of vitamin C (69). Unfortunately it was not widely adopted by the public.

The attempts made by pediatricians in recent centuries to solve the problem of artificial feeding show considerable ingenuity but they also reveal remarkable powers of adaptability on the part of infants who survived. Very little has been written by mothers and nurses themselves (99) but they must be given credit for saving many infant lives in the presence of great handicaps; for example, the mother of the very small weak premature infant born in 1642 who grew up to be Sir Isaac Newton (14). Nurses and mothers were not always in error when they acted upon their own observations which were sometimes contrary to physicians' advice; for example, the nurses who told Arthur V. Meigs his mixture was too weak and increased it in strength as well as quantity as the infant grew older (66).

By the use of evaporated milk in the United States and dried milk in England the problem of artificial feeding of infants has been greatly simplified. Pediatricians of the past appear to have made this problem unduly complicated with the percentage system of formula calculation and rigid feeding schedules. Psychologists of the 20th century emphasize the importance of treating infants and mothers as individuals and developing pleasant attitudes toward food if optimum nutrition is to be obtained (3, 75).

In the United States the majority of infants are now artificially fed. The death rate has declined on an average of 2% each year since 1915. In 1950 it was less than ⅓ the rate in 1915 (52). The perplexing problem of artificial feeding has been simplified and accepted as a satisfactory method of infant feeding, but pediatricians still agree that if possible, it is best for a mother to nurse her child (65, 99).

708 Woodsdale Road
Baltimore 28, Maryland

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DR. J. ALBERT CHATARD HONORED

DR. WARFIELD M. FIROR: Dr. Chatard, the members of the Council wanted to show their affection and admiration for you and they decided that the simplest and easiest way would be to have a Tea and to invite a few of your friends. There will be no long speeches and you are excused from making any remarks.

Dr. Chatard's position in this Faculty is unique for two reasons. To begin with, he is the only one who is a fourth generation member. The bust behind me is that of his great-grandfather, who joined the Medical and Chirurgical Faculty in 1801, and for 154 years a Chatard has been a member of this group.

The large portrait is that of his grandfather and the smaller one close to the bust is that of his father, and this rich heritage is, of course, now carried on by the fifth generation.

It must be a real, durable satisfaction to a man to know that he has carried on the tradition of his father, his grandfather and his great-grandfather, and that his son is now continuing in that line.

Dr. Chatard's relationship to this Faculty is also unique because of his service. He has been a member for more than fifty years. He has been secretary, vice-president and president, and for the last twenty years he has been the watchdog of our treasury. He is now Curator. I know of no other person who has had so many positions in this Faculty and I know of no one who has given as much of himself as Dr. Chatard.

Miss Wynde, who knows everything that goes on in this Faculty tells me he frequently dropped in just to see that everything was going smoothly and to iron out any kinks or any minor difficulties that the office force had. That, I think, is a small evidence of his personal interest.

Those of us who have worked with him on the Council appreciate not only his fidelity but his wisdom. I don't know of any way of more appropriately summarizing this gentleman than by quoting an excerpt from the man whose portrait is on the wall, Sir William Osler: "We are here not to get all we can out of life for ourselves, but to try to make the lives of others happier. The practice of Medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head. Often the best part of your work will have nothing to do with potions and powders, but with the exercise of an influence of the strong upon the weak, of the righteous upon the wicked, of the wise upon the foolish. Yours is a noble heritage"—and how well you have borne that out, Dr. Chatard, "made so by no efforts of your own but by the generations of men who unselfishly sought to do the best they could for selfish humanity. This, not to light a light to shine before men that they may see your good works, contrariwise, you belong to the great army of quiet workers, the members of which strive not, neither do they cry nor are their voices heard in the streets. But to them is given the ministry of consolation in sorrow, need and sickness. To you, the silent workers of the ranks is given the harder task of illustrating with your lives, the Hippocratic standards; a humanity that will show in your daily life, tenderness, consideration to the weak, infinite pity to the suffering, and broad charity to all. A probity that will make you under all circumstances true to yourself, true to your high calling and true to your fellow-man."

Dr. Chatard receives silver platter

That, friends, describes Dr. Chatard. As an evidence of our affection and as a very slight token of our admiration and appreciation, the members of the Council want to give you this small gift and with it are two telegrams from members who could not come.

(Presentation of gift) Applause

DR. CHATARD (with deep emotion): The floodgates may stop. I hope they do. Sometimes you get shocks, and I have one today. I didn't know about this and I don't deserve it. I am alright, now.

You have happy days in your life. In 1913, I was married. Happy days. Children came along, happy days. That's past. Happiness all through my life. But the happiest times I have had, from the time I joined the Faculty in 1904 until today 1955, I just got an idea that this was extreme happiness.

My first position was in 1904 on the Committee on Arrangements, I got deeper and deeper, and the deeper into the Faculty the more happy I became, all the way through. I haven't done anything to be rewarded for. I have enjoyed it as I went along with these various honors that you people gave me, you shouldn't have done it—not for duty, that is all I've done.

Now I go along. I'm ready to get up and give up. I see John King over there, he knows my blood platelets haven't come back after twenty-five transfusions, but John, they may come back. Now I am better, (Tears) I can't help it. Thank you all from the bottom of my heart. (Applause)

I thought I was going to a Council meeting and I was fooled by all of you who did the job secretly.

(Telegram) Warde Allan: (Read)

"Regret unable to be present to enjoy these ceremonies. The best of luck."

I have something particularly to see him about. A patient of mine that he is seeing, and I will have a wonderful talk with him.

Honestly, you people are too kind. Am I boring you?

Answer: Quite the contrary.

(Telegram) Bender Kneisley:

"I'm truly sorry I can't be with you today. Your fine contributions with such spirit of loyalty and devotion will ever be remembered."

I'll get hold of him for the secret plans he joined in with others.

Now, can I open this? You shouldn't have done it. (Opens gift) Forgive my old awkwardness, will you? Then I've got something to tell you. O my! You'll ruin me. Oh! Look at this. Honestly, thank you all.

Walter, is Gus around? (Yes) (Hugs Gus) (Applause)

You know, this day is not only happy this afternoon, but the old man this morning went out on an emergency at 6 o'clock. My wife said, "You can't go." Poor Mr. Tyson was dying, only had a short distance to go. I said I'm going. I got around there, he had a pulmonary edema. Couldn't hear anything except the rales; couldn't feel the pulse. He was clammy. I quickly shot a quarter of morphine and atropine into him. First hypodermic for six months. I sat around about a half hour. He looked up at me and he said, "Albert, thank God you are here." Wasn't that nice? So when we moved him later to the hospital—John King now has him over at Hopkins, and told me: "Albert, the old man is getting well." He is eighty-nine years old; ninety, his next birthday. So maybe on this day, I won't forget that.

But to start out, I want to see each one of you, because it is entirely too much that you have done.

(Applause)

Component Medical Societies

ALLEGANY-GARRETT COUNTY MEDICAL SOCIETY

LESLIE E. DAUGHERTY, M.D.
Journal Representative

Oakland Physician Named Chairman of Planning Group

Dr. Eugene I. Baumgartner, of Oakland, Maryland, a member of the Board of Directors and one of the charter members of the American Academy of General Practice, has been named chairman of the scientific program planning committee, for the Academy's Eighth Annual Assembly next March, in Washington, D.C.

In 1949, Dr. Baumgartner helped organize the Maryland Academy of General Practitioners and served as secretary until 1952, when he became its president.

Since 1949, he has been on the board of governors of Garrett County Memorial Hospital and treasurer since 1950. He first served as president of the hospital staff in 1951 and was again elected its president this year.

He attended the University of Maryland, where he received both his A.B. and M.D. degrees, the latter in 1931. His internship was taken in 1931–32 at Mercy Hospital in Baltimore.

Grantsville Gets New Physician

Dr. Ruth Peachy, daughter of Mr. and Mrs. Shem Peachy, Quarryville, Pennsylvania, opened an office in Grantsville, Maryland on November 1, for the general practice of medicine.

Dr. Peachy attended Eastern Mennonite College, Harrisonburg, Virginia, where she was graduated in 1946, with a B.S. degree. In 1950, she entered Hahnemann Medical College, Philadelphia and received her M.D. degree there in 1954.

Dr. Peachy's internship was served at Bridgeport, Connecticut hospital. She passed the National Board of Medical Examiners in June, 1955, for general practice in Maryland and is now located in Grantsville.

Cumberland Physicians Receive Appointments

Dr. Thomas Robinson, of Cumberland, has again been reappointed to the Recreation Board of Cumberland, after resuming practice following a two year period in the United States Army.

Dr. Robinson is a pediatrician and has for several years been actively engaged in Y.M.C.A. work, as well as public health measures where children are concerned. He previously had served a period from 1952 to 1953, on the same board. Recreation has become a major activity of the City Commissioners, of Cumberland, Maryland.

Dr. Benedict Skitarelic, of Cumberland, was appointed to the executive board of the Allegany-Garrett County Heart Association.

Doctors William Alfred VanOrmer and William Frederick Williams are Co-Chairman of the Heart Disease Program in Allegany and Garrett Counties.

Principles set forth in its program stresses the free services to victims of heart diseases, its social aspects of free medicine, home visits, home care and rehabilitation. It took a step forward, in providing elevator service to all who seek help at its local headquarters.

Dr. Samuel M. Jacobson, who has been very active in the Allegany-Garrett County Heart Association and was one of its founders, was recently honored at a dinner held by the Beth Jacob Jewish Congregation, with a "This Is Your Life" program. Dr. Jacobson was cited for his "devoted and untiring efforts" in behalf of the Jewish fraternity. He was presented with an engraved watch.

Personals

Drs. C. C. Zimmermann and Abraham J. Mirkin, of Cumberland, attended the Annual Congress of the American College of Surgeons, held in October in Chicago, Illinois.

Dr. William E. Moseley, of Mt. Savage, Maryland suffered a cerebral hemorrhage and is temporarily retired from general practice.

BALTIMORE CITY MEDICAL SOCIETY

CONRAD ACTON, M.D.

Journal Representative

Executive Board meetings have been put on a regular schedule for the fourth Tuesday each month. On October 25, the Board passed on proposed changes in the Constitution and By-Laws and directed that they come up for first reading at the November Meeting for final voting at the December Meeting. Printing of the Constitution and By-Laws, current revision, will be contingent upon the action taken. Mr. G. C. A. Anderson, heretofore engaged as legal counsel as needed for critical opinions, has been retained as legal counsel on an annual basis as of 1 October 1955.

Mr. Marden reported that no definite figures are immediately available on Emergency Medical Calls. He is checking the report that the Washington, (D.C.) Medical Society makes a profit in operating a Medical Society Exchange.

The AAPS Essay Contest is going through channels. Dr. H. H. Hopkins, Chairman of the Committee on Public Medical Education has forwarded the plan to Dr. D. C. Wharton Smith. He in turn has taken it up with the Board of Education. The latter Board has now referred it to one of their own committees for consideration.

Dr. Herbert Wilgis reported he has taken the Committee on Accreditation's difficulties directly to the Director of the American Hospital Association, Dr. Edwin L. Crosby, in Chicago.

A perennial problem, control of the Baltimore City Hospitals, was reopened. Should control be under the Department of Welfare or under the Department of Health? Which could be more economical and professionally advantageous? The Board approached this comprehensive, many-faceted problem cautiously. Dr. R. Walter Graham, Jr., Comptroller for Baltimore City, has been invited to discuss this situation with the Executive Board.

On Tuesday, November 1, 1955, a meeting at the VA Hospital on Loch Raven Boulevard was of more than usual local interest. The Mental Hygiene Clinic at the VA Baltimore Regional Office celebrated its Tenth Anniversary with an all-day scientific program. The Baltimore Mental Hygiene Clinic is the oldest out-patient clinic established by the VA in the East. The first clinic in the U.S., in Los Angeles, is only a few months older. The Baltimore VA Clinic treats patients from all of Maryland except those from Prince Georges and Montgomery Counties. The latter are treated at the Washington Mental Hygiene Clinic.

The theme was the tie-in between changing trends in psychotherapy and the philosophy and treatment methods in use. More than three hundred Mental Hygienists: Physicians, psychiatrists, psychologists, social workers, educators attended. Dr. Harry Goldsmith, Chief of the Baltimore Mental Hygiene Clinic, was Moderator. Local speakers included Doctors John C. Whitehorn and Jacob E. Finesinger, professors of Psychiatry at Hopkins and Maryland respectively; Leo Bartemeier, Medical Director, Seton Institute; Lewis B. Hill, Chief Psychiatrist, Sheppart and Enoch Pratt Hospital; Jerome Hartz, Jerome Frank, Eduard Ascher; and Staff Members of the Clinic.

The regular November Meeting of the Baltimore City Medical Society was held in Osler Hall on Friday the Fourth. Ten new members were elected, making a total of 58 this year.

A first reading of three proposed changes in the Constitution and By-Laws was made. These changes will be sent with exact wording to all members before the December Meeting when they will be voted on. In brief they have to do with a) terms of standing committees; b) committee to advise the Woman's Auxiliary; and c) expulsion of members for specified moral turpitude.

President Doctor Amos Koontz predicted easement of the parking situation in the next few years. A meeting at the Lyric and a Shrine Circus at the Armory the same night made parking really difficult for limitless areas. Off street parking is in the planning stage for this vicinity and all will benefit from it.

"Some Studies on the Cellular Response to Acute Bacterial Infection," was the title of the scientific program by Doctor W. Barry Wood, Jr. Doctor Wood had a brilliant undergraduate career at Harvard before graduating from Hopkins in 1936. His distinguished postgraduate work in medicine at Hopkins led to a professorship at Washington University in St. Louis. He has come back to Baltimore to be Professor of Microbiology at the School of Hygiene and Public Health and Vice-President of

the Medical Institutions at Johns Hopkins University. His presentation included dramatic motion pictures and still studies of antibody-opsoninized phagocytosis of pneumococci, also earliest capillary changes induced by inflammation. Given in a classic style and tempo, it was a distinct pleasure to deal again with 'old friend' organisms easily visible and recognizable after many bouts with viruses, electrons, and hypothetic intangibles.

The Auxiliary provided much wonderful cakes and coffee, and deserve much thanks.

FREDERICK COUNTY MEDICAL SOCIETY

LOUIS R. SCHOOLMAN, M.D.

Journal Representative

The regular October meeting was held at Schley Inn, Braddock Heights on the 21st. We missed seeing the usual brilliant October sunset over Middletown Valley because of the rain. However, the speaker more than made up the loss. He was Dr. Robert J. Huebner, Chief of Virus Section, National Microbiologic Institute, National Institute of Health. He spoke of the nature of viruses and their antigenicity and then went on to talk more specifically of the A.P.C. viruses. An animated discussion followed.

Dr. Frederick Heldrich, Jr., a pediatrician practicing in Frederick and Dr. Paul Kadull a full time Camp Detrick physician, were voted in as members.

Hospital Events

The October meeting of the Medical Staff was held on the 3rd. After the business was completed three interesting cases were presented. A case of severe nutritional anemia was described by Dr. B. O. Thomas, Jr. Dr. Russell Guest's case of typhoid fever in an 18 month old child was presented by Dr. Powell. Dr. Thomas Stone and Dr. Henry Chase described a case of phlebothrombosis with recurrent multiple pulmonary infarcts treated on a long term ambulatory basis with anticoagulants. The cases evoked a general discussion.

At the Surgical Department meeting Dr. John M. Culler spoke on the use of tantalum mesh in the repair of hernias.

The October C. P. C. case was one of Gaucher's disease which was treated successfully ten years before by splenectomy. After this presentation Dr. Furie discussed briefly similar diseases in which there are lipoid disorders of the reticuloendothelial system.

WICOMICO COUNTY MEDICAL SOCIETY

WILLIAM S. WOMACK, M.D.

Journal Representative

The Wicomico County Medical Society meeting for October was called to order on October 10, 1955 by the President, Dr. William Fisher.

The minutes of the previous meeting were read and approved.

The following doctors were admitted or have been admitted since the last meeting: Dr. Paul Cayaves, general surgeon; Dr. E. A. Purnell, general practitioner; Dr. Raymond Yow, urologist. The above three applicants have been accepted into this Society.

Under new business brought up before the Society at the above date, there has been a committee appointed for liaison with the local television officials for possible local radio television medical programs for the community.

Dr. William Fisher then presented the speaker for the evening who was Dr. Kricklair who is Associate Professor of Plastic Surgery at the Columbia Medical Center in New York City. He gave us a very interesting lecture on the treatment of burns. Dr. Kricklair was in charge of the care of the burned patients in the explosion on the "Bennington." He gave a very interesting account demonstrated with color slides. There was a lot of discussion following his paper and the meeting adjourned with no further business.

Necrology

A. S. CHALFANT, M.D., *Chairman*

Memoir Committee

Kenneth B. Boyd, M.D.*

1901–1955

Dr Kenneth B. Boyd, gynecologist and obstetrician who devoted more than twenty years to the practice of his specialties in Baltimore, died October 23, 1955, in his home at Five Stratford Road. He had been ill for almost a year.

Dr. Boyd, an active member of the staff of seven hospitals here, was for fifteen years chief of obstetrics at Maryland General a post he relinquished about five years ago. Until illness halted his practice, he was active at Maryland General and at Mercy, Franklin Square, University, Church Home, Lutheran and Woman's Hospitals.

Born in Baltimore 1901, Dr. Boyd attended the Cathedral Parochial Church and Calvert Hall College until he went on to take his medical degree from the University of Maryland.

The specialist interned at the Hospital for the Women of Maryland. His career also included a period as resident in gynecology at University Hospital.

A member of the American Medical Association, the Baltimore City Medical Society, and the Medical and Chirurgical Faculty of Maryland, Dr. Boyd was also a Fellow of the American College of Surgeons and a diplomate of the American Board of Gynecology and Obstetrics.

He is survived by his widow, Mrs. Hallie A. Boyd; his mother, Mrs. Annie B. Boyd; his brother, Harry R. Boyd; and a niece, Ann Marie Boyd.

Lewis G. Frazier, M.D.

1864–1955

Lewis G. Frazier, who died July 3, 1955, in Kensington, Maryland, was a valued member of the medical profession during a long and useful life. After his retirement, he spent eight winters in Florida. Later he made his home in Kensington with his only son.

Born in Oxford, North Carolina, in 1864, he was educated at Davidson College, North Carolina and afterward was graduated from the Medical School of the University of Maryland. His special interest in the field of medicine was gynecology, though he became a general practitioner.

Portsmouth, Virginia, was the scene of his early practice. Later he spent eight years in Baltimore. From this City he moved to the Eastern Shore of Maryland where he continued his practice for thirty-five years.

Dr. Frazier was a man of genial nature, an optimist, whose attitude of good cheer inspired hope and confidence in his patients. They seemed to feel that he was capable of accomplishing what amounted almost to miracles. For instance, when he responded one day to a knock on his door, he found a small girl looking up confidently into his face as she requested that he bring her a baby sister.

A man whose son was bowlegged from birth was quite impressed when Dr. Frazier succeeded in making them straight. He assured him that he had made a better job than the originals! No need was too slight for him to fill. He had time for children's requests, such as setting the broken leg of a small boy's dog.

He entered the sick room with sunshine and left with a joke.

Dr. Frazier was a deacon in the First Baptist Church of Hurlock, Maryland, and was the principal promoter in its erection.

He is survived by his wife, who now lives in Richmond, Virginia, and his son of Kensington, Maryland —also one granddaughter.

* Reprinted by courtesy of the *Morning Sun*, October 24, 1955.

Library

"Books shall be thy companions; bookcases and shelves, thy pleasure-nooks and gardens." *ibn Tibbon*

ARE YOU DEHYDRATED?

RAYMOND L. MARKLEY, M.D.*

She was a colored girl, dressed in a short white hospital gown, seated beside her bed, oblivious of the other patients in the ward. Tightly held between her scrawny knees was a bottle of red nail polish. Periodically she dipped the small brush she held in her left hand into the polish and, concentrating deeply, she carefully applied the polish to the nails on her right hand. As she did so the bottle of glucose hanging from the pole beside her chair slowly dripped away, now slower, now faster as she raised and lowered her left arm. For the infusion needle had been inserted and taped into a vein of her lower left arm so that activity was not limited. The miracles of modern medicine!

As the writer watched this scene, his mind wandered and a thought occurred. How convenient it would be if we could similarly receive an infusion of medical literature, the latest advances, the ageless truths, available for the asking. Of course, the latest advances *are* available for the asking. The ageless truths *are* available for the asking. Our library stacks overflow with a wealth of material available for the asking. But how few ask and how few even intravenously would be content to spend the time. The rewards are in a fuller, happier life. But let's go back for a moment to "intravenous knowledge." What pictures one can conjure. What possibilities exist. Consider if you will the following "handbook for students," a brief outline of definitions and procedures.

Handbook of "Therapy"

"Fluid Balance" of Knowledge

In considering the topic in general we must be aware of the need for various types of knowledge. Daily requirements consist of a careful balance between specialized and non-specialized information. Religion, the political picture, sports events, hobbies, and our own professional interest should be considered. A wealth of knowledge in one will not compensate for a lack in another.

Estimation of Need for Fluids

We must evaluate ourselves in the light of our colleagues.

Routes of Administration

A. The "cut down." This technique is to be used for the severely ill, when the individual has progressed to a state of complete collapse and infusion is the last resort. Material may be best administered in the form of organized lectures and special courses. Some local anesthesia is usually required, i.e., a big name lecturer to swell the attendance records. Many persons are required to initiate the procedure and if cost is mentioned the patient will usually refuse the treatment. Some will pull out the needle before the infusion is finished.

B. The "dull needle" routine. This ruse will frequently stimulate the individual to take by mouth when other measures have failed. It consists of a caustic remark by a colleague or friend such as, "You never read the journals, do you?"

C. "If you don't eat you get an infusion" method. This technique is usually self-imposed. "I'm taking

* We feel very elated to present, for the first time, a guest columnist, a regular library patron and Faculty member from Baltimore City. Mary Emily Berge, Librarian.

exams next year so I have to go to the library and read." This method is a relatively good one, since new examinations seem to appear every year.

Types of Administration

Standard texts in one's own library form a sound basis for a balanced intake. Add to this the recent literature and when at last the balance is just right, read a bibliography. What's that? Someone has called it the forgotten sifting by the author of available material by other men writing on the same subject.

Precautions

Consider and avoid possible reactions to infusion. Read one article and go off the deep end. Many different "companies" make up infusions of the same general type and if you find disagreement with the results of one then try others.

Keep intake-output records. For proper guidance as to what is being received and what is being given for easy reference in case of any particular need when the occasion arises it is well to keep a handy reference file. The individual should use his own discretion as to personal needs.

Cards or a notebook with the name of author, article read, and journal listed and filed are of great value. Your librarian will aid in the preparation of bibliographies.

So we conclude our brief handbook. You can add your own individual routines. But it is well to remember that even were it possible to infuse ourselves with the fundamentals of knowledge, the ultimate aim would still be to "take by mouth." The intravenous route would soon become a needless chore reserved only for the hopelessly ill. The recovering individual would soon build up a reserve of energy, a forthright desire to progress and daily imbibe of the endless store of available books and articles—"Unrestricted"—ad lib.

Medical Arts Building
Baltimore 1, Maryland

HEW OFFICIALS CITE SHORTAGES OF PUBLIC HEALTH PERSONNEL

The AMA Washington Letter, No. 84–46

Shortages of trained public health personnel and what to do about them were a dominant theme of Department of Health, Education, and Welfare officials who spoke at the annual meeting of the Association of State and Territorial Health Officers here November 9. Commented HEW Secretary Folsom: "Today when the potential benefits of public health services are greater than ever before, many state and local health departments are hampered by shortages of trained personnel." His suggested solutions: (1) health officers to make more training available to those already on the job and (2) federal responsibility in this field, including pending bills in Congress for traineeships in public health and more training of nurses.

Mr. Folsom indicated the administration also would press for passage of legislation making health grants to the states more flexible "and thus more useful in meeting the needs of each state and territory."

PHS Surgeon General Scheele urged public health officers to become concerned with "wide spectrum health services." He included health and medical components in vocational rehabilitation, welfare, education, employment security, agriculture, housing, water resources and others.

Health Departments

BALTIMORE CITY HEALTH DEPARTMENT

Tuberculosis in 1955

During recent years a rapid and dramatic drop in tuberculosis mortality has been noted in the City of Baltimore and generally throughout the country. Morbidity, however, as measured by number of newly reported cases of tuberculosis, has shown no decline of similar proportions. For example, in the City of Baltimore the trend of mortality and morbidity for the period 1950–1954 which is shown below indicates that the decline in the mortality rate for this five year period has been 64 per cent but that there has been no measurable decline in morbidity.

Resident Tuberculosis Morbidity and Mortality Rates, Baltimore City, 1950–1954

Year	Rate Per 100,000 Population	
	Morbidity	Mortality
1950	141.7	56.4
1951	143.8	52.1
1952	155.1	43.2
1953	142.1	27.8
1954	142.1	20.6

It was to be expected that effective antibiotic therapy which brought about such sharp decreases in deaths would influence the reservoir of infection and the rate of development of new cases. During the first nine months of 1955 the expected decline in tuberculosis morbidity has finally evidenced itself in the recorded number of new cases reported to the Baltimore City Health Department. For the total population there was a drop of 13 per cent in the case rate for tuberculosis. In the white population there was a decline of 10 per cent and in the colored population the drop is estimated to be about 18 per cent. The difference in the rate of decline in the two racial groups may be associated with the greater effectiveness of chemotherapy in acute cases of tuberculosis than in the chronic type of disease. For this reason the decline in morbidity may continue to be sharper among Negroes than in the white population.

The decrease in new cases has contributed to the greater availability of hospital beds for the care of the tuberculous. A check with the Bureau of Tuberculosis indicates that whereas waiting lists were common a year ago this phase of tuberculosis control appears to be passed. At the present level of tuberculosis morbidity there appears to be an adequate number of beds to assure prompt hospitalization of persons requiring such care.

Huntington Williams, M.D.

Commissioner of Health

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

Office of the Secretary—Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio

The next scheduled examination (Part I), written examination and review of case histories, for all candidates will be held in various cities of the United States, Canada, and military centers outside the continental United States, on Friday, February 3, 1956.

Case Abstracts numbering 20 are to be sent by the candidate to the Secretary as soon as possible after receiving notification of eligibility to the Part I written examination.

STATE OF MARYLAND DEPARTMENT OF HEALTH

MONTHLY COMMUNICABLE DISEASE REPORT

Case Reports Received during 4-week Period, December 2–29, 1955

	CHICKENPOX	DIPHTHERIA	GERMAN MEASLES	HEPATITIS, INFECT.	MEASLES	MENINGITIS, MENINGOCOCCUS	MUMPS	POLIOMYELITIS, PARALYTIC	POLIOMYELITIS, NON-PARALYTIC	ROCKY MT. SPOTTED FEVER	STREP. SORE THROAT INCL. SCARLET FEVER	TYPHOID FEVER	UNDULANT FEVER	WHOOPING COUGH	TUBERCULOSIS, RESPIRATORY	SYPHILIS, PRIMARY AND SECONDARY	GONORRHEA	OTHER DISEASES	DEATHS: Influenza and pneumonia
Total, 4 weeks																			
Local areas																			
Baltimore County	23	—	4	2	72	—	44	—	—	—	3	—	—	—	17	—	6	*-1 t-2	7
Anne Arundel	10	—	—	—	1	—	21	—	—	1	3	—	—	1	3	2	—	—	2
Howard	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	2	—	—	—
Harford	1	—	1	—	—	—	—	—	—	—	2	—	—	—	2	—	1	—	1
Carroll	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	2
Frederick	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	2
Washington	3	—	—	2	48	—	1	—	—	—	—	—	—	1	5	—	—	—	2
Allegany	18	—	—	—	—	—	—	—	—	—	—	—	—	2	4	—	—	—	1
Garrett	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	2
Montgomery	19	1	—	7	1	—	13	—	1	—	5	—	—	—	—	—	—	—	1
Prince George's	16	—	—	—	—	1	3	1	1	—	5	—	—	—	4		1	—	2
Calvert	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Charles	1	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	3
Saint Mary's	3	—	4	1	3	—	1	—	—	—	7	—	—	—	1	—	—	—	—
Cecil	—	—	—	—	—	1	—	—	—	—	—	—	—	18	1	—	—	—	1
Kent	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Queen Anne's	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Caroline	4	—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	1	—	—
Talbot	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Dorchester	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1
Wicomico	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	10	—	—
Worcester	—	—	—	—	—	—	—	1	—	—	—	—	—	1	2	—	—	—	—
Somerset	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Counties	100	1	9	13	127	2	84	2	2	1	25	0	0	29	50	4	22		31
Baltimore City	69	0	14	3	423	1	68	0	0	0	34	0	0	2	77	9	447	t-1	26
State																			
Dec. 2–29, 1955	169	1	23	16	550	3	152	2	2	1	59	0	0	31	127	13	469		57
Same period 1954	174	1	16	39	45	8	100	6	3	0	276	3	0	94	134	12	633		61
5-year median	266	4	11	—	155	3	97	8		0	92	1	2	67	165	22	520		48
Cumulative totals																			
State																			
Year 1955 to date	2381	13	499	351	2364	31	1801	166	108	23	2312	19	0	401	1980	204	7218		633
Same period 1954	3332	20	318	809	11442	43	2937	153	97	22	1690	21	6	946	2127	168	7787		554
5-year median	3560	27	640	—	5595	58	2260	379		39	1341	29	33	692	2467	261	7602		581

* = tetanus.

t = tularemia.

MARYLAND BLUE CROSS PAYS ONE MILLIONTH HOSPITAL BILL

R. H. DABNEY*

Maryland Blue Cross recently reported payment of its one millionth hospital bill. This important milestone marks a significant point in the development of this non-profit hospital service plan. Now in its nineteenth year, Blue Cross has paid more than $78,000,000 in benefits.

The obvious fact is that Blue Cross has done the the job it was organized to do in 1937, when Maryland Hospital Service was established. Then, as now, the basic objectives were two-fold—to provide a workable and effective means for people to budget for hospital care and, as a logical result of this purpose, to finance the hospitals themselves through regular and adequate payments for *service benefits*.

Two prime factors lend sharp perspective to this achievement, the increasing number of people who have joined Blue Cross over the years and the increasing number of these enrolled subscribers who have used hospital care. Payment of the one million hospital bills resulted from the inseparable effects of these two factors.

One of the basic obligations inherent in the Blue Cross principle is to enroll as many people as possible everywhere in the community, those who are eligible to join through their employed groups and those, too, who have no such group affiliation, but who can join directly as non-group subscribers. Better than words, the enrollment figures show how membership has grown in Blue Cross:

Year (31 December)	*Total Membership*
1938	32,454
1939	55,006
1940	80,663
1941	119,240
1942	161,864
1943	202,089
1944	278,628
1945	333,094
1946	441,284
1947	551,637
1948	616,741
1949	691,566
1950	801,731
1951	842,117
1952	860,237
1953	864,804
1954	878,900
1955 (31 October)	932,885

Year after year, total membership has increased, rapidly during the immediate postwar years when the public became widely conscious of the need for such protection, and tapering off to a gradual rise in recent years. This year, Maryland Blue Cross has had its biggest enrollment gain in five years, and another milestone—one million enrolled subscribers—is quickly approaching for Maryland Hospital Service.

Today, more than 940,000 people in Maryland have Blue Cross memberships, roughly 40% of the population or better than one in three. Some 61,000 of these subscribers joined in 1955. Blue Shield, too, is having a big enrollment year with the enrollment of more than 75,000 subscribers in the year 1955 to bring total membership to 336,183 in this companion medical-surgical plan.

Like a geometric progression, membership and, similarly, hospital admissions, have continued to increase each year. It is significant that just in 1955 alone, Maryland Blue Cross has paid out more than $11 million, one-eighth of the total amount paid during all the years. At this rate, Blue Cross will pay another one million hospital bills in a considerably shorter time.

As enrollment has increased, more and more people have become eligible for Blue Cross benefits. And statistics show that each year more subscribers per thousand (the basis on which Blue Cross computes its rate of utilization) have entered hospitals. In 1947, for example, it was 92.4 patients per thousand subscribers. In 1949, it was 99.2. And in 1954, the utilization rate climbed to 106.7, excluding outpatient care. Still, this rate is well below the average reported in other areas.

*R. H. Dabney, Director, Maryland Hospital Service, Inc., Maryland Medical Service, Inc.

Year (31 December)	*Subscribers Receiving Benefits*
1938	1,824
1939	4,641
1940	6,465
1941	8,774
1942	12,049
1943	17,600
1944	22,308
1945	30,818
1946	39,679
1947	51,671
1948	63,850
1949	74,649
1950	90,551
1951	100,304
1952	111,038
1953	124,375
1954	132,640
1955 (31 October)	118,563

Together, the member hospitals, the medical profession and public-spirited citizens in the community have made the "one-millionth-payment" milestone possible. As medical science and hospital care continue to progress, bringing better and better medical care to people in the community, so shall Blue Cross continue to develop and expand its benefits to meet modern-day needs for its subscribers.

ROLLS OF NEEDY AGED DECLINE 20%, OASI PENSIONS UP 150%

The AMA Washington Letter, No. 84-45

Latest information from the Social Security Administration shows the proportion of people receiving old-age assistance payments (based on need) has declined 20% in the last five years, but because states are increasing the amount of individual payments, the total expenditure has increased. At the same time, figures released by the agency indicate that in the same period the proportion of old people receiving old age and survivors payments has increased by about 150%. (Old-age assistance is a federal-state program, with state matching required; OASI is entirely federal.)

Commenting on the drop in numbers receiving old-age assistance, the administration says: "The economic prosperity of the nation is reflected to some extent in this decline. Another major reason is the continued growth in the number of aged persons who now receive benefits under the old-age and survivors insurance program." The 150% increase in proportion of OASI recipients is explained only in small part by shift of elderly assistance cases to the pension rolls; most of the increase was caused by congressional action in extending coverage to additional occupations and making it increasingly easy for older persons to qualify for pensions.

In June 1950 the aged population (65 and over) numbered 12,399,000, of whom 2,786,690 were receiving old-age assistance, or 225 of every 1,000. Latest data (June 1955) shows an age-65-and-over population of 14,244,500, of whom 2,544,496 or 179 in every 1,000 were receiving old-age assistance.

In June of 1950 approximately 169 in every 1,000 aged persons, or about 2,094,000, were receiving OASI pensions. Five years later, 423 in every 1,000 or 6,025,000 were receiving OASI pensions, a proportional increase of about 150%. The month of June is used by SSA to demonstrate what has been happening to the old age assistance program. Five years ago payments for that month totaled $122,350,000, or an average of $43.85 to the 2,790,000 recipients. Last June the rolls had dropped to 2,549,000, but total payments had increased to $133,297,000, for an average of $52.30 per recipient.

Book Reviews*

Fractures in Children. Walter T. Blount, M.D. The Williams and Wilkins Company, Publishers, Baltimore. Copyright, 1955. 279 pages. 309 illustrations. $9.50.

This is a most useful and valuable book for both the general practitioner and the specialist. The book itself is a composite of the experience of the members of the Fracture Service of the Milwaukee Children's Hospital. The arrangement of the book is excellent for easy access for specific problems. The book is profusely illustrated and the specific problems that one sees in the various bones and joints are serially visualized with x-rays and line drawings and a long-term follow-up result is usually shown. Indications and contraindications for operation are specifically discussed. The method for application of various types of splints and traction is illustrated for specific types of injury. Skull fractures and craniocerebral injuries, as well as fractures and dislocations of the facial bones, are included.

It is the opinion of this reviewer that there is no other book to my knowledge that covers the subject so completely and so compactly. This book should be included in the library of anyone dealing with bone injuries in children.

J. P. M.

Textbook of Clinical Pathology. Fifth Edition. Edited by Seward E. Miller, M.D., Medical Director, U. S. Public Health Service; Chief, Division of Special Health Services, Washington, D. C. Copyright 1955. The Williams and Wilkins Company, Baltimore, Publishers. 1208 pages. $11.00. Illustrated.

It has been my pleasure to have had close association with the Editor of this volume while on duty with the United States Public Health Service. He became, largely through his own diligence, a capable clinical pathologist. In recent years, he was transferred to administrative duties away from his laboratory and consequently has been dependent on the co-authors of this book for improvement of Roy Kracke's original book. Some of the introductory paragraphs to the various chapters are wordy and increase the number of pages.

The book contains a wealth of information on the interpretation of laboratory tests which are correlated with the clinical findings. Even useless tests which have been given wide publicity are mentioned with a view to warning the reader of their unsuitability.

There are many changes in the new edition which improve the coverage. Completely new chapters on medical bacteriology, medical mycology, and medical parasitology have been added. The field of exfoliative cytology could well be the subject of a new chapter.

The Textbook of Clinical Pathology is recommended by the reviewer as a valuable addition to the physician's library and as a textbook for teaching laboratory medicine.

H. L. W.

* The reviews here published have been prepared by competent authorities and do not represent the opinions of any official bodies unless specifically stated.

SS TIGHTENS UP ON RESIDENCY DEFERMENTS

The AMA Washington Letter, No. 84-46

Between next July and June 30, 1957, military needs for physicians "will be of such magnitude as to require active duty of all interns and residents who have not satisfied their military liability, and perhaps some liable physicians of priority III who are older and who may be established in practice." This warning, from the National Advisory Committee to Selective Service, adds that "it will not be possible to support deferment for any current intern for residency training except those included in the Department of Defense's Residency Consideration Program and perhaps some in exceptional situations necessary to the national health, safety or interest. . . ."

Woman's Auxiliary Medical and Chirurgical Faculty

MRS. ALBERT E. GOLDSTEIN, *Auxiliary Editor*

REPORT FROM THE WOMAN'S AUXILIARY TO THE MONTGOMERY COUNTY MEDICAL SOCIETY*

MRS. AUSTIN B. ROHRBAUGH, JR.†

The Woman's Auxiliary of The Montgomery County Medical Society is planning with enthusiasm, an interesting and worth while year of 1955–1956.

Our plans are laid to conform as much as possible with the aims of our constitution, namely, through its members. The objects of this auxiliary shall be:

(1) Through its members to extend the aims of the medical profession to all organizations which look to the advancement of health and education.

(2) To fulfill such functions as may be needed at County, District, and State Medical Meetings.

(3) To do such work as may be approved from time to time by The Montgomery County Medical Society.

(4) To promote acquaintanceship among physicians' families, that fellowship may increase and at all times stimulate a feeling of local cooperation.

To accomplish these objects, we had an active committee working with the doctors during the week of the Diabetic Drive. This committee helped with the distribution of posters and other publicity to keep the public well aware of the purpose of this drive. Similar work was done with the Tuberculosis Drive in that we distributed boxes and helped with the distribution of seals. As a direct aid to The Medical Society we cooperate and work with them in their annual social function, namely, a dinner dance held during the month of November. Our attendance and participation at the State Meeting is stressed to our members and a very excellent cooperation has been noted.

* This is one of a series of reports from the Component Auxiliaries.

† President, Woman's Auxiliary to the Montgomery County Medical Society.

Every effort has been made with what we feel to be considerable success to make our program conform to the aims of the Auxiliary and at the same time interesting enough to assure good attendance. Following is our program for the year:

September 20, 1955

Business and Social Meeting
Orientation—What the Auxiliary Means—by Mrs. John Ball

October 18, 1955

Flower Arrangement—by Mrs. Frederick Lang

November 15, 1955

Montgomery County Medical Society Dinner Dance

December 13, 1955

Christmas Party

January 17, 1956

Dr. Hugh Hussey, "The Doctor's Wife and Public Relations—The telephone"

February 21, 1956

Mental Health—Talk by Dr. Robert Harper, well known marriage counselor

March 20, 1956

Maison's presents, "The Latest in Hats for Spring"

April 17, 1956

Interior Decorating—Mr. Myers, Decorator, W. & J. Slone Co.

May 15, 1956

Social, Annual Reports, Installation of Officers

As a supplement to the program and a suggestion from the Ways and Means Committee to increase

our general fund, a fashion show was held at the Columbia Country Club with a luncheon served to 155 members and guests. This proved not only to be beneficial from a monetary standpoint, but also an extremely successful social event.

The nurse recruitment program started in 1952 is the major year to year project of our Auxiliary. So far, we have sent two girls to nursing schools who will be in the 1956 and 1957 graduating classes. At the present time, we are searching for a third candidate.

During the year of 1954–1955, we had a concentrated drive on membership which resulted in increasing our organization to 71 active members.

The women of the Auxiliary all strive to take an active part in our Auxiliary and each member called on by her President has always, with willingness and enthusiasm, carried out her assigned tasks. This we feel makes it not only a pleasure to serve as President, but indicates an interest in what we feel to be one of the best Auxiliaries in the State.

REPORT OF THE TWELFTH NATIONAL CONFERENCE OF STATE PRESIDENTS, PRESIDENTS-ELECT AND NATIONAL COMMITTEE OF THE WOMAN'S AUXILIARY TO THE A. M. A.

MRS. HOMER R. TODD, SENIOR, *President-Elect**

Registration was 200 with representation from practically every Component Auxiliary.

The Convention was called to order by our National President, Mrs. J. Mason Lawson. After her greeting, the National President-elect, Mrs. Robert Flanders, Conference Presiding Officer took over the Conference activities.

The Conference took on a new look this season. It was conducted on a Panel basis. This was not the usual Panel Program, but one that was comparable to any glamour program on T.V. or radio.

Each Panel had a National Chairman as moderator and State Presidents as participants. The moderators were witty and pleasing in asking questions and were well versed on their subjects. The participants had been thoroughly briefed and were equally pleasing in answering.

All topics of Auxiliaries activities were discussed. After each panel discussion there was a question and answer period. Also present were Physicians, National Directors and Resource Authorities from A. M. A. Headquarters to furnish further information on each panel subject.

Subjects emphasized on the panels were *Safety*—Know the safety needs of your community and be ready to promote safety campaigns whenever necessary.

American Medical Education Foundation—Auxiliary members should be informed of recent developments in Medical Education and of the need for continued and increased support of our Medical Schools. Be ready to serve with the Woman's Division of the National Fund in the "80" Dimes Campaign—during one week, April 23–30, "Medical Education Week," organized in 1949 by General Eisenhower, then President of Columbia University, the Fund was granted a Federal Charter by Congress in 1954.

This is the formal recognition both of the National aspects of the Medical School problem and of the Funds role as the recognized agency for obtaining private support for the schools.

Civil Defense is necessary for our survival.

Legislation is essential for the preservation of our democracy and even our own lives.

Mental Health is at present our major health problem.

Recruitment of young women for nursing and allied careers is important. This program—*Today's Health* and *Bulletin* are sources of information on health education.

At one of our luncheons we had the honor of having as our guest speaker, Dr. Elmer Hess, President of A.M.A. He paid high tribute to the Physician, who first is a citizen and as a citizen is interested in what goes on in his community. Physicians are perhaps the most respected individuals in a given community.

Another delightful feature of the Convention was a "Sherry Party" given on Tuesday evening by Mrs. Lawson and Mrs. Flanders in their suite at the Drake Hotel. It was pleasant seeing old friends and meeting new ones.

* The Conference was held in Chicago, Illinois on November 1, 2, 3, 1955, with Headquarters at the Drake Hotel.

AMERICAN MEDICAL ASSOCIATION COMMITTEE ON LEGISLATION

Regional Legislative Conference*

The Regional Legislative Conference of the American Medical Association was held at the Hotel Statler in New York on October 29, 1955.

Dr. David B. Allman, Chairman of the A.M.A. Committee on Legislation presided.

In his opening talk, Dr. Allman expressed the imperative need for Doctors and their Auxiliary wives to know their Congressmen and write them when alerted.

What makes Congressmen vote the way they do? Is their voting logical or political?

Many are thinking people but they must please their constituents who put them there and they must please the voter if they wish to go back.

He urged Chairmen of Legislation to read and study Chicago and Washington A.M.A. Legislative Letters, write the Congressmen when requested and know something about bills with medical implication or to quote Benjamin Franklin. "If we do not hang together, we'll hang apart."

Mr. Joseph Stetler, director of the A.M.A. Law Department, was the first speaker. He talked on Health Reinsurance and Mortgage Loans.

Health Reinsurance Bill (House HR 3458, Senate S 860)

A.M.A. opposes this plan and opposed it last year. It was voted down but will come up again. It is unnecessary, dangerous and unsound.

1. Insurance is available from private sources.

This bill will not aid the indigent who must be given aid from Federal, State and Local level. It is just another government debt that the taxpayer must meet. Federal subsidy soon becomes Federal control.

The Government guarantee Loan HR 7700 was also opposed by the A.M.A.

This bill concerns loaning money for costly medical buildings and health facilities. We all favor homes, highways and health but the government is letting its eagerness to achieve ideal conditions run away with its concern for practical limitations.

Bricker Amendment will come up again in this session in a new form. But it is a change of language not principle. It is a question of foreign treaties conflicting with the Constitution.

Treaty Powers Supersede Our Laws

Why should treaty powers written in foreign languages difficult to comprehend take precedence over our congressional laws? A.M.A. opposed it because it might concern laws with medical implications.

Retirement Plan for Physicians

Dr. D. G. Smith opposed.

A.M.A. does not oppose Social Security. It does oppose compulsory Federal retirement plan for physicians.

Reasons: Practicing doctors do not wish to retire at 65 years of age. It has been proved that the insurance companies can offer better values than Government retirement plans and safer because there is no proof the Government will not change its plan anytime. It is not dependable. Social security taxes that go into U. S. Treasury are not earmarked.

The question and answer period at the end of the program was very enlightening.

The Legislative Chairman had studied the Bill carefully and realized its weakness. But their chief complaint was the fact that they could not get the busy doctors in their cities and counties to study the bill. No one objected to a voluntary bill of retirement but the danger lay in making it compulsory.

Every doctor and Medical Auxiliary member was urged to participate in national politics.

* The Conference was held at the Hotel Statler, New York City, on October 29, 1955. Mrs. Albert E. Goldstein attended this conference.

COMING MEETINGS

BALTIMORE CITY MEDICAL SOCIETY

GRANT E. WARD, M.D., *President* JOHN N. CLASSEN, M.D., *Secretary*

Friday, February 3, 1956, 8:30 p.m.

Faculty Building, 1211 Cathedral Street, Baltimore

The Nature of Coronary Artery Disease. Benjamin M. Baker, Associate Professor of Medicine, The Johns Hopkins University School of Medicine.

WOMAN'S AUXILIARY TO THE BALTIMORE CITY MEDICAL SOCIETY

MRS. CONRAD ACTON, *President* MRS. JOHN B. DEHOFF, *Secretary*
MRS. W. KENNETH MANSFIELD, *Treasurer*

Wednesday, February 8, 1956, 11:00 a.m.

Faculty Building, 1211 Cathedral Street, Baltimore

Practical Considerations of Value in Understanding the Health Problems of Atomic Warfare. Lt. Colonel Gerald M. McDonnel, Radiology Department of Walter Reed Hospital.

Colonel McDonnel has been a representative of the U. S. Army Department on Special Weapons, Division of the Department of Defense. He has had extensive experience in the medical aspects of nuclear weapons, and he has worked in a liason capacity with the Atomic Energy Commission. His address will be accompanied by colored motion pictures.

SECTIONAL MEETING OF THE INTERNATIONAL COLLEGE OF SURGEONS

February 12–15, 1956

Greenbrier Hotel, White Sulphur Springs, West Virginia

The profession is cordially invited to attend with their wives. The Greenbrier Hotel is giving a special holiday rate during the entire course of the meeting.

AMERICAN COLLEGE OF SURGEONS SECTIONAL MEETING

February 13, 14, 15 and 16, 1956

Headquarters: Bellevue-Stratford Hotel, Philadelphia, Pennsylvania

The General Surgical and Specialty programs and technical exhibits will be at the Bellevue-Stratford Hotel.

Non-Fellows are charged a five dollar registration fee.

Fellows, members of the Junior Candidate Group, Internes and Residents pay no fee.

Hotel accommodations may be requested from the Philadelphia Convention and Visitors Bureau, 17th and Sansom Streets, Philadelphia, Pennsylvania.

THE COMMITTEE FOR THE STUDY OF PELVIC CANCER

RICHARD W. TELINDE, M.D., *Chairman* BEVERLEY C. COMPTON, M.D., *Secretary*

Thursday, February 16, 1956, 5:00 to 6:00 p.m.

Faculty Building, 1211 Cathedral Street, Baltimore

Sponsored by the Maryland Division of the American Cancer Society and the Medical and Chirurgical Faculty.

MATERNAL MORTALITY COMMITTEE

HUNTINGTON WILLIAMS, M.D., *Chairman* GEORGE H. DAVIS, M.D., *Secretary*

Thursday, February 23, 1956, 4:00 p.m.

Faculty Building, 1211 Cathedral Street, Baltimore

Joint Committee on Maternal Mortality of the Baltimore City Medical Society and the Baltimore City Health Department.

BALTIMORE CITY MEDICAL SOCIETY

GRANT E. WARD, M. D., *President* JOHN N. CLASSEN, M. D., *Secretary*

Friday, March 2, 1956, 8:30 p. m.

Faculty Building, 1211 Cathedral Street, Baltimore

SYMPOSIUM ON USES AND ABUSES OF ANTIBIOTICS

The Choice and Use of the Most Appropriate Drug. THEODORE E. WOODWARD, M. D., Professor of Medicine and Head of the Department of Medicine, The University of Maryland School of Medicine; Physician-in-Chief, The University Hospital.

Resistant and Complicating Infections. GEORGE S. MIRICK, M. D., Associate Professor of Medicine, The Johns Hopkins University School of Medicine and The University of Maryland School of Medicine; Physician-in-Chief, The Baltimore City Hospitals.

Drug Toxicity and Allergy. IVAN L. BENNETT, JR., M. D., Associate Professor of Medicine, The Johns Hopkins University School of Medicine; Physician, The Johns Hopkins Hospital.

ANNUAL MEETING
1 9 5 6
MEDICAL AND CHIRURGICAL FACULTY
WEDNESDAY, THURSDAY, and FRIDAY MAY 2, 3, and 4, 1956

Have you a journal article to finish—with the dead line drawing nearer and nearer? And are you busier and busier and wondering how you can possibly have it ready on time? The library staff will be glad to check your bibliography and verify the entries.

VA MAKING 5-YEAR STUDY OF MENTAL PATIENTS

The AMA Washington Letter, No. 84-46

Veterans Administration has started a 5-year study of its mental hospitals to determine what types of treatment and hospitals best promote improvement or recovery of patients, and the relative costs. VA said the project should go a long way toward establishing psychiatric care on a much higher level of effectiveness and thereby speed the recovery or improvement of patients at the least possible cost. Heading the project is Dr. Richard L. Jenkins, former chief of psychiatric research at VA headquarters. Fifteen of VA's 40 NP hospitals will participate in the studies. They will include (1) additional controlled research on value of new tranquilizing drugs compared with older treatment, (2) control study of admissions for a 2-year period, with examinations at stated intervals to ascertain improvement, and (3) follow-up of patients after discharge.

DR. SCHEELE SEES 'SUBSTANTIAL PROTECTION' IN ONE SALK SHOT

The AMA Washington Letter, No. 84–46

In the opinion of Surgeon General Scheele, there is strong evidence that even one shot of Salk vaccine gives "substantial protection" against paralytic poliomyelitis. Addressing the Association of Military Surgeons, meeting in Washington, he declared: "The results of the use of the (Salk) vaccine in 1955 thus far give strong evidence that children who received even one dose were substantially protected against paralytic polio." He said paralytic attack rates in vaccinated children were shown to be 67 to 90% lower than in unvaccinated children of the same age.

Another development in Salk vaccine was completion of laboratory tests of the six suspected lots of Cutter vaccine produced under the old standards. Public Health Service said that live type one virus had been isolated in all six lots. Dr. Scheele said live virus of types two and three also had been demonstrated in a seventh lot, but that "no increase in the incidence of polio is reported to have been associated with its use."